



METHANE  
GUIDING  
PRINCIPLES

# Methane Guiding Principles Signatory Reporting

N.V. Nederlandse Gasunie

January 2022

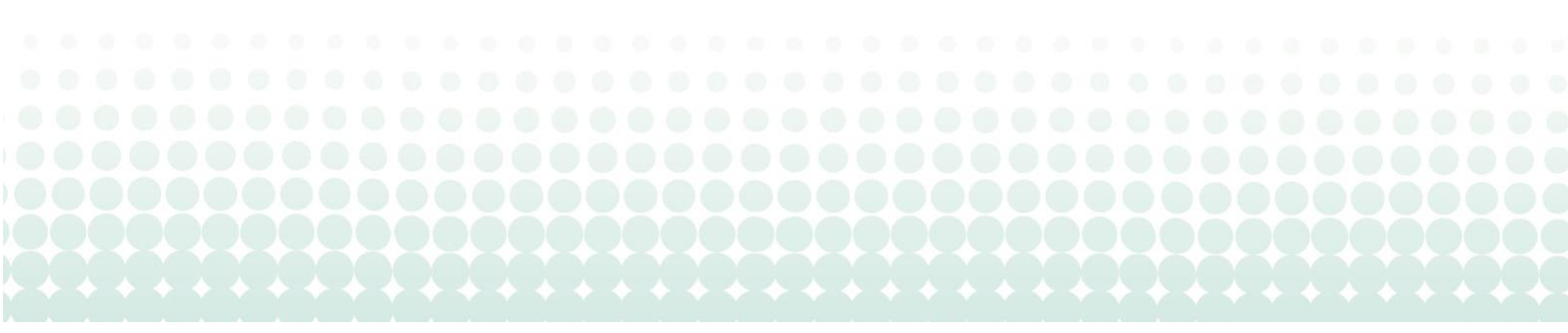




**COMPANY: N.V Nederlandse Gasunie**

**YEAR OF JOINING METHANE GUIDING PRINCIPLES: May 2019**

**SENIOR REPRESENTATIVE: Leen Pronk**



**Principle One:**  
Continually reduce methane emissions

2021 completed activity	2022 intended activity
<p>Methane emission from several pressure regulators is eliminated by either replacement, or applying instrument air or nitrogen. The total reduction is estimated 25 tonnes per year.</p> <p>In 2021 a mobile flare with a capacity of 1.200 m<sub>n</sub><sup>3</sup> per hour came into service. Flaring of natural gas is done to reduce the enviromental impact if venting of natural gas cannot be avoided.</p> <p>Gasunie participated in a GERG (Europoean Gas Research Group) study where commercial available equipment for methane measurement was tested.</p> <p>All leak detection and repair activities scheduled, are completed.</p> <p>Recompression of gas with a recompressor unit avoided 998 tonnes of methane in 2021.</p>	<p>Methane emission from pressure regulators on Beverwijk and Windeweer will be operated with compressed air. The total methane reduction is estiumated at 17 tonnes per year.</p>



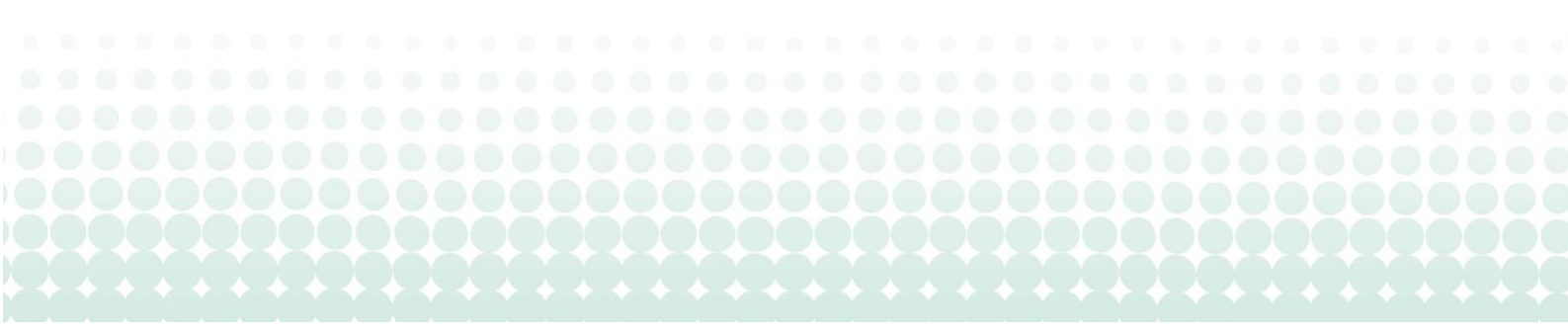
## Principle Two:

### Advance strong performance across the gas supply chain

2021 completed activity	2022 intended activity
<p>Gasunie is a member of Marcogaz and GIE. We chair the working group for methane emissions in Marcogaz. In 2021 several reports for methane emissions were published via Marcogaz.</p> <p>Further activities in 2021 were</p> <ul style="list-style-type: none"> <li>• Organising webinars with the European Energy Community on methane emissions.</li> <li>• Contribution to an OGMP task force for a guidance for uncertainty and reconciliation.</li> <li>• Working together with Methane Guiding Principles (MGP).</li> <li>• Approval of the OGMP template for reporting including guide for DSO, TSO, LNG and UGS</li> <li>• Publishing a technical recommendation for leak detection and repair.</li> </ul> <p>Gasunie has taken convenorship of CEN TC234 WG14 Methane. This working group published a CEN technical specification for the assessment of methane emissions for Transmission System Operators (TSOs), Distribution System Operators (DSOs), Liquefied Natural Gas (LNG) and Underground Storage (UGS). The next step is approval of the document via a formal vote of the various national standardization bodies.</p>	<p>Gasunie will continue to participate in Marcogaz and GIE for developments on methane emissions.</p> <p>In 2022 Marcogaz plans to work on emission factors for industry and to describe best available technologies for the midstream and downstream gas sector to avoid methane emissions.</p> <p>We will process the voting results to improve the CEN TC234 technical specification for methane assessment for TSO, DSO, LNG and UGS.</p>

**Principle Three:**  
Improve accuracy of methane emissions data

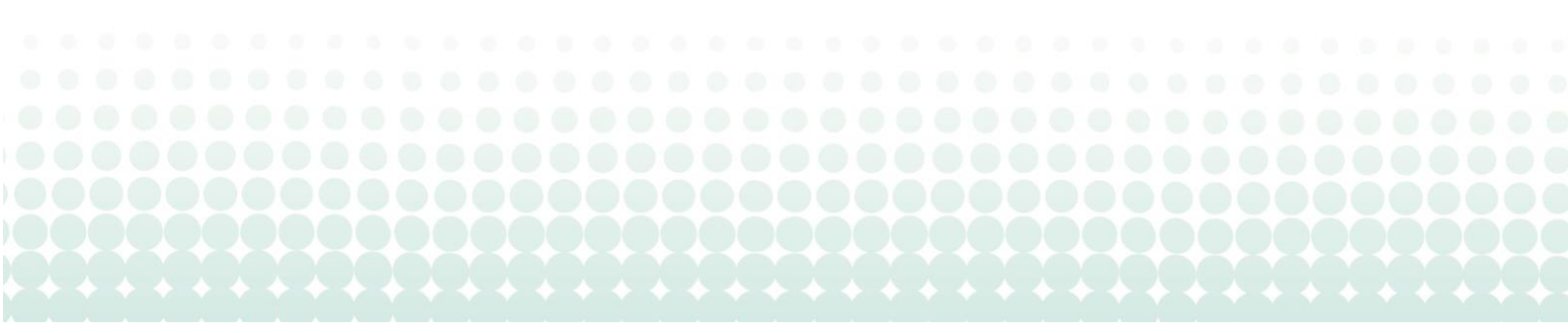
2021 completed activity	2022 intended activity
<p>Gasunie participated in a GERG project where a study was performed by the RICE institute for the applicability of satellites for site level measurements.</p> <p>Gasunie participated in a GERG project to do research on commercially available methane site-specific (top down) measurements. This study was completed in 2021. Nine site-specific measurements and 3 source-specific (bottom up) measurements were tested against controlled releases of methane.</p> <p>Gasunie completed a study to obtain better and more accurate emission factors for pneumatic devices.</p> <p>Gasunie implemented a policy change so that for fugitive emissions on compressor stations above 1.000 ppm bagging is used as an additional measure to quantify emissions. .</p> <p>Gasunie started using gas imaging technology for determining the vents from open ended lines on compressor stations.</p> <p>Internal quarterly reporting of methane emissions.</p>	<p>Gasunie is planning to participate in a GERG project where the ability of different measurement apparatus are tested on operational compressor stations.</p>



**Principle Four:**

**Advocate sound policy and regulations on methane emissions**

2021 completed activity	2022 intended activity
<p>Gasunie worked together with GIE, Marcogaz, Eurogas and with several institutions on improvements for measurement reporting and verification and the reduction of methane emissions.</p> <p>These institutions are:</p> <ul style="list-style-type: none"> <li>- European Commission</li> <li>- UNEP</li> <li>- OGMP</li> <li>- European Energy Community</li> <li>- Methane Guiding Principles</li> <li>- CEN TC 234 WG14</li> <li>- Dutch branche organization</li> </ul>	<p>Continuation of the work via GIE, Eurogas and Marcogaz and CEN TC 234 and the other institutions</p>



## Principle Five:

### Increase transparency

2021 completed activity	2022 intended activity
<p>In 2019 Gasunie joined MGP as a signatory member.</p> <p>In 2020 Gasunie joined OGMP for reporting.</p> <p>Gasunie publishes methane results in an annual report.</p> <p>Gasunie delivered 2020 methane data in accordance with the OGMP format.</p> <p>Gasunie has taken convenorship of CEN TC234: working group methane. This working group published a CEN technical specification for the assessment of methane emissions for TSO, DSO, LNG and UGS for voting,</p>	<p>Gasunie will publish methane results in its 2021 annual report.</p> <p>To deliver 2021 methane data in accordance with the OGMP format.</p> <p>Via Marcogaz we plan to deliver better emission factors for mid and downstream gas sector.</p> <p>MGP reporting 2021.</p>



## Methane Emissions

<p><b>Do you report absolute methane emissions within your sustainability report?</b></p>	<p>Gasunie reports absolute methane emission in its annual report. The methane emission is reported under scope 1 of the greenhouse gas protocol as network losses. <a href="#">annual report 2021</a></p> <p>Methane is reported as an absolute number and in CO<sub>2</sub> equivalents.</p>
<p><b>Do you report a methane intensity within your sustainability report?</b></p>	<p>Gasunie is not reporting a methane intensity. Instead of an intensity Gasunie reports an absolute number for methane emissions.</p>
<p><b>What are your organisation's total absolute methane emissions?</b></p> <p><b>Provide a figure in tonnes.</b></p> <p><b>Provide latest data publicly available.</b></p>	<p>Methane emission</p> <ul style="list-style-type: none"> <li>- The result of the total methane emission for 2020 was 4434 tonnes methane.</li> <li>- Final methane data of 2021 will be published in our annual report of 2021 (expected January 2022).</li> </ul> <p>Reporting</p> <ul style="list-style-type: none"> <li>- Gasunie publishes an annual report with our total methane emissions. This reporting is verified by an independent accountant.</li> <li>- For each compressor station an annual e-MJV (electronical environmental report for the government) is reported.</li> </ul>
<p><b>State your methodology.</b></p>	<p>The inventory of our emission sources consists of:</p> <ol style="list-style-type: none"> <li>1. Fugitive emissions of compressor station, underground storage facilities, measurement and regulating stations, gas delivery stations, high pressure valve stations.</li> <li>2. Vented emission from: maintenance, measurement equipment, pneumatic devices, compressor starts / stops, compressor seal gas emissions, incident emissions.</li> <li>3. Incomplete combustion emissions of gas fired compressors and gas engines.</li> </ol> <p>Gasunie has been working for years to set up a methane inventory. The inventory is based on the outcome of research projects in the last decade, and piping &amp; instrumentation</p>





	<p>diagrams of potential leaking sources. Further coupling with SAP asset databases are included.</p> <p>Depending on the type of emission we use measurement, calculation and estimation to derive the methane emission factors.</p>
<b>State your reporting boundary.</b>	<p>The system boundaries for our methane reporting includes:</p> <ul style="list-style-type: none"> <li>- Gasunie Transport services BV (operated assets)</li> <li>- BBL Company V.O.F (operated asset)</li> <li>- Energystock B.V. (operated asset)</li> <li>- Gasunie Germany (operated asset)</li> </ul>
<p><b>What are your organisation's methane intensity?</b></p> <p><b>Provide latest data publicly available.</b></p>	Not applicable
<b>State your methodology.</b>	Not applicable
<b>State your reporting boundary.</b>	Not applicable
<p><b>Do you have a methane emission target?</b></p> <p><b>If yes, please state what it is, including the boundaries and methodology.</b></p> <p><b>If no, are you developing such a target? Please state your intended timeline.</b></p>	<p>We have the following emission reduction targets for methane:</p> <p><b>2030:</b> The methane emissions (network losses) in 2030 (converted) will amount to a maximum of 50 kilotonnes of CO<sub>2</sub> equivalent.</p> <p><b>2025:</b> Based on our company target to emit &lt;50 kt CO<sub>2</sub> eq. of methane in 2030 and our 2020 emission level of 100 kt CO<sub>2</sub> eq., Gasunie commits to emit &lt; 75 kt CO<sub>2</sub> eq. of methane in 2025.</p> <p><b>2050:</b> our infrastructure will be completely CO<sub>2</sub> neutral from 2050.</p>

