



METHANE  
GUIDING  
PRINCIPLES

# Methane Guiding Principles Signatory Reporting

N.V. Nederlandse Gasunie

January 15<sup>th</sup> 2021





COMPANY: **N.V Nederlandse Gasunie**

DATE: **January 15<sup>th</sup> 2021**

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

SENIOR REPRESENTATIVE: **Ronald Kenter**



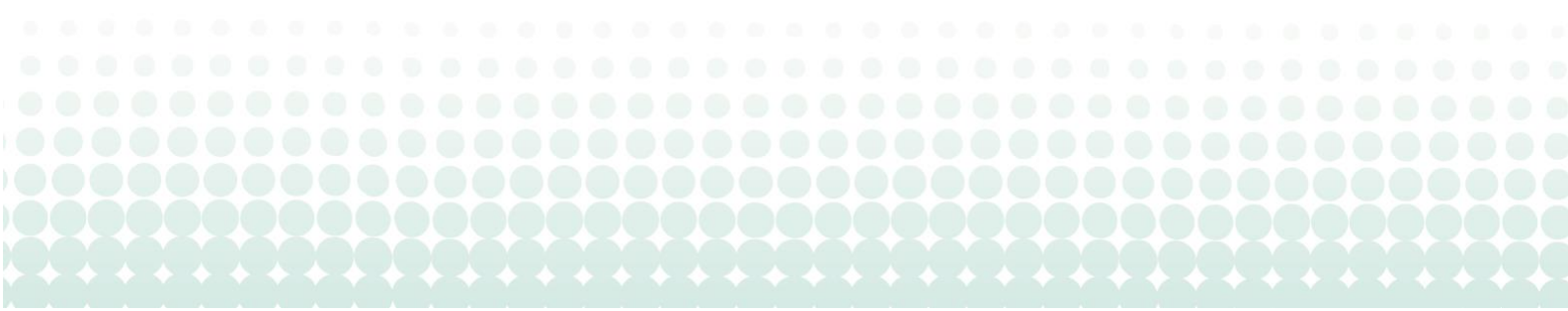
## Principle One: Continually reduce methane emissions

| Historical completed activity   | 2021 intended activity   |
|---|--|
| <ul style="list-style-type: none"> <li>• Taking compressor station Oldeboorn out of service reduces methane emissions by approximately 59 tonnes per year. By closing 2 regulating stations (Vondelingenplaat LC-gas and Hoogezand) an amount of 8 tonnes methane is avoided on a yearly basis.</li> <li>• Closing of gas blending station Kootstertille reduced our methane emission by approximately 23 tonnes per year.</li> <li>• Reduction station Windeweer was taken out of service. The methane reduction is approximately 1 ton per year.</li> <li>• Gasunie participated in a GERG study where commercial available equipment for methane measurement was tested.</li> <li>• All Leak Detection and Repair activities scheduled, are completed.</li> <li>• Recompression of gas with the recompressor unit avoided 30 tonnes of methane in 2020.</li> <li>• In 2020 we put into service a flare with a capacity of 500 m<sub>n</sub><sup>3</sup>/hour. A flare can be used to avoid methane emissions by burning natural gas that would be vented otherwise.</li> </ul> | <ul style="list-style-type: none"> <li>• Preparation of engineering for replacement of pneumatic devices for measurement and regulating stations.</li> <li>• After a feasibility study Gasunie is planning replacement of gas operated control valves with electrical operated valves on reduction station Angerlo. This replacement will reduce methane emissions with approximately 10 tonnes per year.</li> <li>• Measurement and regulating station Vondelingenplaat HC-gas will be rebuilt and therefore 13 tonnes of pneumatic methane emissions will be avoided per year.</li> <li>• Gasunie will participate in a GERG study for top down measurement of methane emissions.</li> <li>• Taking out gas compression of high calorific gas (HC-gas) on compressor station Beverwijk will lower methane emission by approximately 45 tonnes per year</li> <li>• Improvement of emission quantification.</li> <li>• In 2020 we expect to buy a flare with a capacity of 1200 m<sub>n</sub><sup>3</sup>/hour.</li> </ul> |



## What are your organisation's total methane emissions?

| Historical completed activity  | 2021 intended activity |
|--|------------------------|
| <p><b>Methane emission</b></p> <ul style="list-style-type: none"> <li>The preliminary result of the total methane emission for 2020 is approximately 4503 tonnes. That is approx. 0,01% of the volume transported.</li> <li>Final methane data will be published in our annual report in 2020.</li> </ul> <p><b>Boundaries of reporting</b></p> <ul style="list-style-type: none"> <li>The system boundaries for our methane reporting includes: <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> </ul> </li> </ul> <p><b>Type of emissions</b></p> <p>The inventory of our emission sources consists of:</p> <ol style="list-style-type: none"> <li>Fugitive emissions of compressor station, underground storage facilities, measurement and regulating stations, gas delivery stations, high pressure valve stations.</li> <li>Vented emission from: maintenance, measurement equipment, pneumatic devices, compressor starts / stops, compressor seal gas emissions, incident emission</li> <li>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 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> <p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>Gasunie publishes an annual report with our total methane emissions. This reporting is verified by independent accountancy.</li> <li>For each compressor station an annual e-MJV (electronic environmental report from government) is reported.</li> <li>Methane is reported as an absolute number and in CO<sub>2</sub> equivalents.</li> </ul> |                        |



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

| Historical completed activity  | 2021 intended activity |
|--|------------------------|
| <p>Gasunie is not reporting a methane intensity. Instead of an intensity Gasunie reports an absolute number for methane emissions.</p> |                        |

Do you have a methane emission target?

| Historical completed activity   | 2021 intended activity  |
|---|---|
| <p>We have the following emission reduction targets for methane.</p> <ul style="list-style-type: none"> <li>• <b>2020:</b> CO<sub>2</sub> equivalent emissions that are a direct consequence of our own business activities (scope 1 of the green house gas protocol) will be reduced by 20% compared to the reference year 1990 (this is a reduction of 124 kilotonnes CO<sub>2</sub> equivalents).</li> <li>• <b>2030:</b> an average annual reduction of 4% in the emissions that are a direct result of our own business activities (scope 1 greenhouse gas protocol). The reduction is always compared with the emissions in the three previous years (3-year average is determined) and will be achieved to a large extent by reducing our methane emissions.</li> <li>• <b>2030:</b> The methane emissions (network losses) in 2030 (converted) amount to a maximum of 50 kilotonnes of CO<sub>2</sub> equivalents.</li> <li>• <b>2050:</b> our infrastructure will be completely CO<sub>2</sub> neutral from 2050.</li> </ul> | <p>Reduction targets are part of a Plan Do Check and Act cycle.</p> <p>The level of ambition as well as relevant conditions like CO<sub>2</sub> pricing, are evaluated on regular basis</p> |



## Principle Two:

### Advance strong performance across the gas supply chain

| Historical completed activity   | 2021 intended activity |
|---|------------------------|
| <p>Gasunie is a member of Marcogaz and GIE. We chair the working group for methane emissions in Marcogaz. This year Marcogaz worked on different subjects:</p> <ul style="list-style-type: none"> <li>• Organising 2 webinars with the energy community on methane emissions.</li> <li>• Working together with OGMP for membership Transmission System Operators (TSO), Distribution System Operators (DSO), Underground Storage (UGS) and Liquefied Natural Gas (LNG).</li> <li>• Working together with Methane Guiding Principles (MGP) to establish two best guiding documents for:               <ul style="list-style-type: none"> <li>○ Identification, Detection, Measurement and Quantification,</li> <li>○ Transmission, Storage, LNG Terminals and Distribution</li> </ul> </li> <li>• Publishing template for reporting including guide for DSO, TSO, LNG and UGS</li> <li>• Publishing a technical recommendation for leak detection and repair for DSO, TSO, LNG and UGS (to be expected end of 2020)</li> <li>• Participation in GERG project</li> <li>• Cooperation with Gazprom joint presentation</li> </ul> |                        |

## Principle Three:

### Improve accuracy of methane emissions data

| Historical completed activity   | 2021 intended activity   |
|---|--|
| <ul style="list-style-type: none"> <li>• Gasunie participates in GERG to do research on commercial available measuring techniques for methane.</li> <li>• Gasunie did research to obtain better and more accurate emission factors for pneumatic devices.</li> <li>• For fugitive emissions on compressor stations above 1.000 ppm bagging is also applied.</li> <li>• Use of gas imaging for open ended lines on compressor stations.</li> <li>• Internal quarterly reporting of methane emissions.</li> </ul> | <p>Participation in GERG top down measurement project for methane emissions.</p> |



## Principle Four:

### Advocate sound policy and regulations on methane emissions

| Historical completed activity  | 2021 intended activity |
|--|------------------------|
| <p>Gasunie worked together with GIE and Marcogaz with several institution on methane emissions.</p> <p>This institutions are:</p> <ul style="list-style-type: none"> <li>• European commission</li> <li>• UNEP</li> <li>• OGMP</li> <li>• Methane Guiding Priciples</li> <li>• CEN TC 234 WG14</li> <li>• Dutch branche organization</li> <li>• Nogepe</li> </ul> <p>Results of this participations are for example a reporting template for mid and downstream operators and a recommendation on Leak Detection And Repair.</p> |                        |

## Principle Five:

### Increase transparency

| Historical completed activity   | 2021 intended activity    |
|---|---------------------------|
| <p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>• Gasunie publishes methane results in an annual report</li> <li>• In 2020 Gasunie joined OGMP for reporting</li> <li>• In 2019 Gasunie joined MGP as a signatory member.</li> </ul> | <p>OGMP 2.0 reporting</p> |

## Commentary:

### Other activities to increase transparency

- Via Marcogaz Gasunie is working towards a CEN technical report on methane assessment for DSO and TSO.

Together with OGMP 2.0 a new reporting template for midstream and downstream gas sector was developed.

