



METHANE  
GUIDING  
PRINCIPLES

# Methane Guiding Principles Signatory Reporting

SNAM

March 2023





COMPANY: **SNAM**

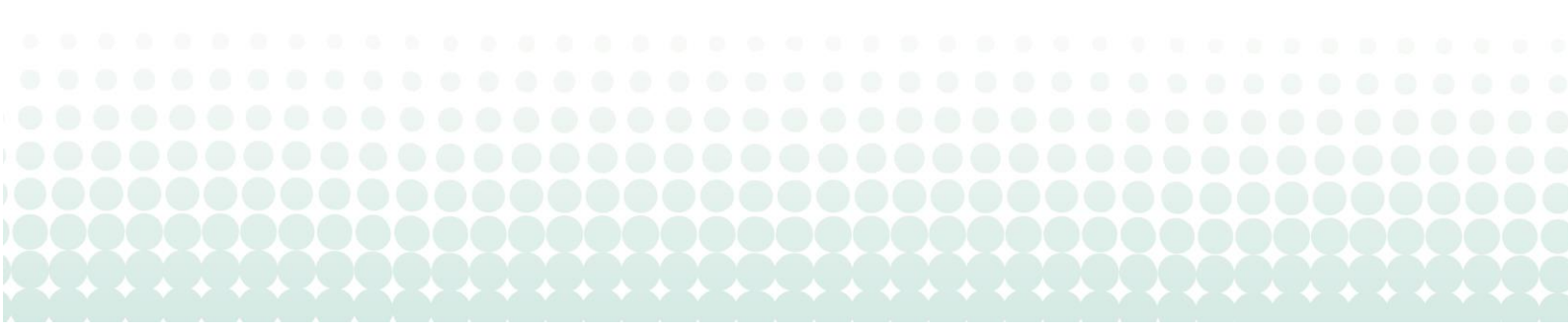
YEAR OF JOINING METHANE GUIDING PRINCIPLES: **2018**

SENIOR REPRESENTATIVE: **Massimo Derchi, Chief Industrial Asset Officer**



## **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.





2022 completed activity

2023 intended activity



Snam has a **multi-year programme** (2018-2030) to reduce methane emissions for all its businesses (gas transmission, storage and regasification). Some initiatives are described below:

- Leak Detection and Repair (**LDAR**) conducted according to **EN 15446** and **US EPA's Method 21**, implemented on a regular basis in all the major facilities since 2020;
- Use of **in-line recompression** technology, to recompress gas instead of venting it on the occasion of maintenance or construction works on the gas transportation network;
- Use of **hot-tapping technique** for new pipeline connections;
- **Pipeline pressure reduction** at the lowest possible level on the occasion of maintenance activities or construction works;
- Recovery of blowdown gas at compressor stations using **stationary compressors**;
- **Installation/replacement in pressure reducing stations of valves** to reduce emissions from the condensate tank of filters (approx. 350 stations) and from the blowdown vents (more than 200 stations);
- **Replacement of gate valves with ball valves** in compressor stations (station and compressor blowdowns), in pressure reduction stations (station blowdowns) and in the LNG terminal;
- **Conversion of pneumatic controllers** to compressed air or to electrically controlled devices;
- **Replacement of high-bleed regulating valve control devices** with low emission devices in pressure reducing stations;

Snam will continue implementing its multi-year programme.

Consequently, Snam emissions in 2023 are expected to decrease in line with the path towards the -55% reduction target by 2025 vs 2015. At least a **48,6% reduction** is expected.

Snam is also trying to anticipate the outcomes of the oncoming **Eu Regulation**, and preparing for the expected requirements as much as possible.



- Installation of a second compressor to recompress boil-off gas in the LNG terminal

More details can be found in the Methane Guiding Principles (MGP) Best Practice Guide for Transmission, Storage, LNG Terminals and Distribution, where several Snam initiatives are presented as case studies: <https://methaneguidingprinciples.org/best-practice-guides/>.

In 2022 Snam total methane emissions from operated assets accounted for **27,37 MScm of natural gas** (17.037 tons of methane):

- 18,36 MScm from the transmission system (11.416 tons of methane);
- 5,72 MScm from storage (3.558 tons of methane);
- 3,29 MScm from Liquefied Natural Gas (LNG) (2.063 tons of methane).

The emission breakdown by source is:

- Vented emissions: 7,79 MScm (4.849 tons of methane);
- Fugitive emissions: 13,39 MScm (8.340 tons of methane);
- Pneumatic emissions: 6,09 (3.786 tons of methane);
- Unburnt: 0,10 MScm (62 tons of methane).

In 2022 Snam also updated the GWP of methane = 29,8 in order to evaluate the Carbon Footprint according to the last IPCC Report.

Snam has an absolute target to reduce total natural gas emissions from operated assets (gas transmission system, Underground Storage (UGS) and LNG) by **55% by 2025 vs 2015**. This target is more ambitious than the OGMP 2.0 recommended target (-45% at 2025 vs 2015).

In 2022 Snam has set also a new reduction target **-65% at 2030 vs. 2015**. This target is more ambitious than the Global Methane Pledge target (-30% at 2030 vs. 2020).

This commitment is also aligned with the Snam overall goal to become Net Zero Carbon by 2040.

**In 2022 the reduction vs. 2015 (base year) is of 22,36 MScm (-45,0%)**, in line with the path towards 2025. The OGMP recommended target at 2025 (-45%) was achieved three years early. These reductions were achieved through the ongoing implementation of the mitigation measures mentioned above.

Snam has also a target **to recover every year at least 40% of natural gas** that can be potentially emitted from maintenance activities of the transmission system (on average over the last five years), and which is recovered with in-line recompression, hot-tapping, lowering pipeline pressure before venting and recovering blowdown gas with permanent compressors in compressor stations, instead of venting. In 2022 this target was achieved **(57% of gas recovered on average over the last five years)**.

These targets are included, among others, in our **ESG scoreboard**, which is monitored and reviewed annually.

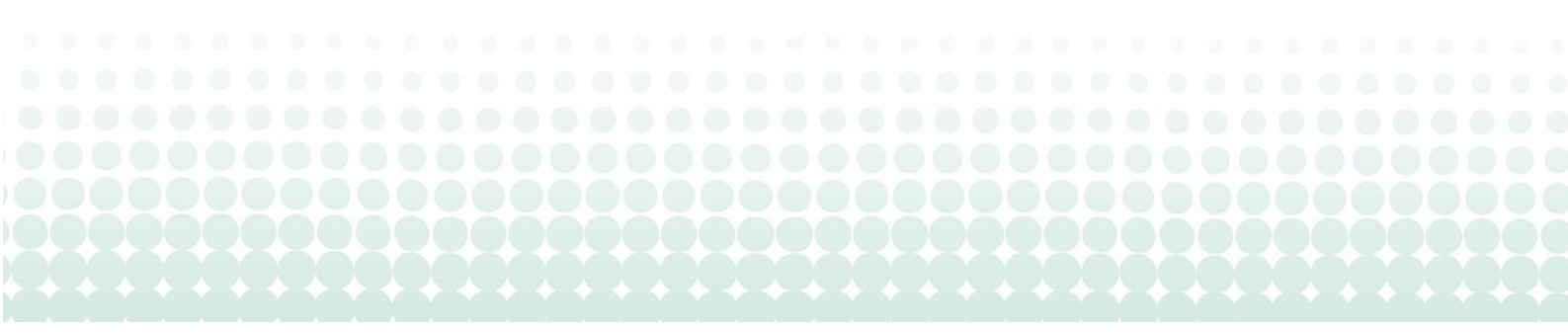
Based on strong commitments to reduce methane emissions, Snam was awarded in 2022 the **International Gas Union (IGU) Global Gas Award** for innovation and sustainability in this area.

## **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.







2022 completed activity

2023 intended activity



In 2022 Snam organized several meetings with its national (OLT and Adriatic LNG) and international **affiliates** (Terega, Desfa, TAG, GCA, TAP, IUK, ADNOC), to share best practices and emission reduction strategies, also considering that SNAM has **targets on Scope 3 emissions**, which require further engagement with the Non-Operated Joint Ventures.

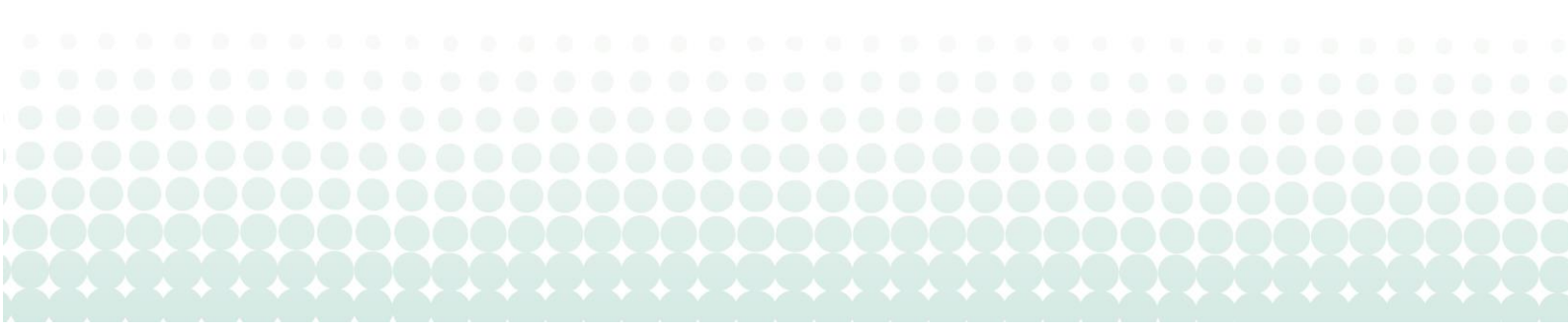
In 2022 Snam actively participated in the debate on the update of the document **“Guidelines for an Italian strategy on methane emissions from the natural gas supply chain”**, a study carried out by the environmental association Friends of the Earth (Amici della Terra) with the support of Environmental Defense Fund Europe (EDF-Europe). This document is the result of direct participation of operators from several segments of the supply chain, technology providers, trade associations, environmental NGOs and relevant institutional players in Italy. The purpose of the document is to encourage an active participation of Italy in the stages of the European legislative process, starting from the measures provided for in the Methane Strategy. The strategy also includes, among other proposals, specific quantitative targets for the upstream, transport and distribution sectors  
([https://amicidellaterra.it/images/metano/STRATEGIA\\_CH4\\_2022\\_web.pdf](https://amicidellaterra.it/images/metano/STRATEGIA_CH4_2022_web.pdf))

Snam is also collaborating with the Italian gas associations, comprising companies of the gas value chain, with the aim of creating synergies that favor business operations and developing common strategies on core topics. In particular, in 2022 Snam actively participated in a working group of Assorisorse, the Italian Sustainable Energy & Resources Industry Association) that drafted a **White paper on methane emissions** :  
([https://www.assorisorse.org/wp-content/uploads/2022/11/WhitePaper\\_Lo-Nigro\\_Emissioni-Metano\\_webV2.pdf](https://www.assorisorse.org/wp-content/uploads/2022/11/WhitePaper_Lo-Nigro_Emissioni-Metano_webV2.pdf)). The work

Snam will continue to engage and collaborate with its **NOJVs** to provide **guidance on methane emissions**, also in accordance to the data collection requirement of the OGMP 2.0 Framework and the new Scope 3 emission reduction target.



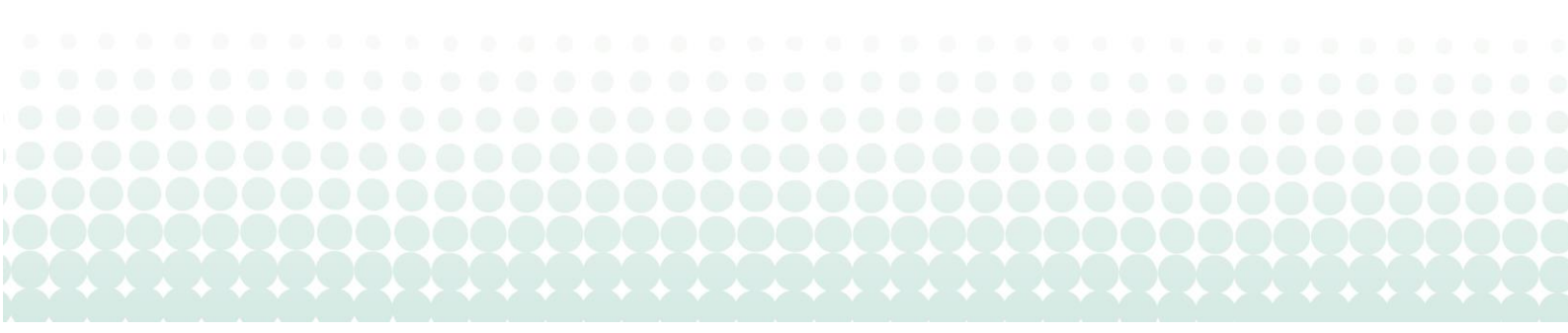
has the objective of giving the right information on what has been done and on what development projects and initiatives are currently in place and planned, with the ultimate aim of providing a contribution and indications for the various institutions, associations and parties involved, at local, national and European level.



### 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 has been adopted into your accounting process if at all.

2022 completed activity	2023 intended activity
<p>To determine emissions, Snam developed in the 1990s its own <b>methodology</b> in co-operation with the US-Gas Research Institute and Radian, compliant with the European Marcogaz methodology, developed by the European Gas Industry. This methodology is integrated with a series of <b>personalized emission factors determined through measures taken in the field</b>, on a representative sample of facilities, applying EN 15446 standard. Snam methodology is currently equivalent to a Tier 3 approach, according to IPCC guidelines, and the emission data quality corresponds to <b>a level between 3 and 4, according to the OGMP 2.0 Reporting Framework.</b></p> <p>In 2022 Snam continued implementing an action plan to achieve the gold standard of the Framework, i.e. a path to move to level 4 and 5 of the Framework and <b>in July 2022 OGMP confirmed to Snam the Gold Standard</b> of the Framework on methane emissions reporting, that was awarded in 2021.</p> <p>As an action of this plan, in 2022 some tests were performed in some Compressor Stations and Pressure Reduction Stations to measure</p>	<p>In 2023 Snam will continue implementing the <b>action plan</b> to achieve the Gold Standard of the <b>OGMP Reporting Framework</b>, i.e. a path to move to level 4 and 5 of the Framework, in particular with an intensive campaign of top down measurement techniques in its own facilities and measurement campaign for pneumatic emissions.</p>





methane emissions at site level with **top-down technologies**, with a drone.

Snam, with other European Transmission System Operators (TSOs), is also participating in a **GERG project**, focused on the analysis of methane emissions quantification methodologies following a top-down approach. A first phase was focussed on a study on the available state-of-the-art technologies, and it was followed by some field tests and analysis of results. The project aims to set an harmonized approach for the application of top-down and bottom-up approaches to reconcile the two sets of data and reduce uncertainty in methane emissions estimations.

From 2020 Snam has started a **LDAR programme** on a regular basis with measurements of all the leaks according to EN 15446 and US EPA's Method 21 in over 1,000 facilities to be completed in four years, hence improving the accuracy of fugitive emissions data.

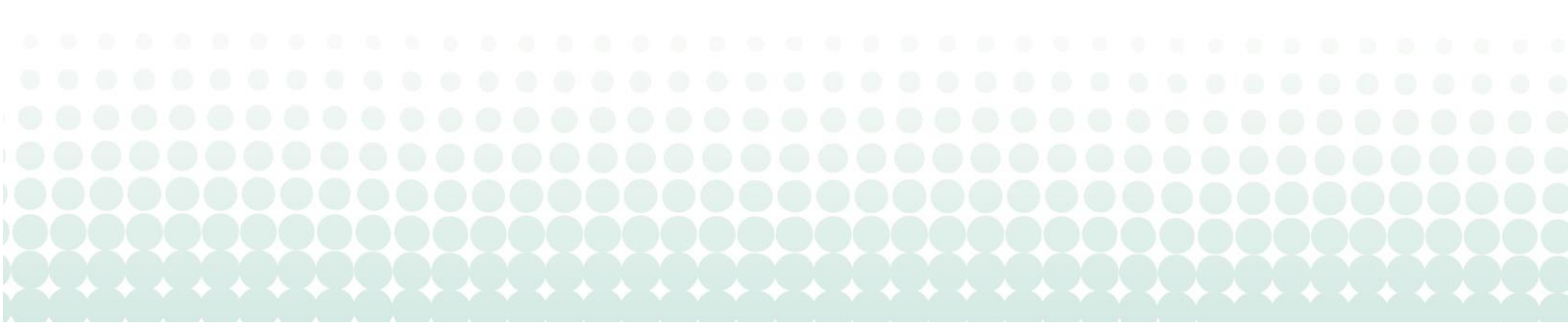
## Principle Four:

### 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.

2022 completed activity	2023 intended activity
<p>Snam is actively participating in different <b>Working Groups and Task Forces</b> at EU / international level (IGU, Gas Naturally, Marcogaz, GIE, CEN, GERG, just to mention a few).</p> <p>In particular, within GIE and Marcogaz, several reference European gas industry documents were developed with Snam support.</p> <p>In 2022, Snam, in coordination with other European TSOs, participated in the <b>Group of Experts</b> nominated by the European Gas Association (Entsog, Eurogas, Marcogaz, GIE, GERG), to provide advocacy, guidance and comments on the draft <b>EU Regulation</b> on methane emissions in the energy sector. This was done also at a national level, in coordination with the <b>Gas Trade Associations in Italy</b>.</p> <p>In 2022 Snam has also been participating, as coordinator of the Group, in a Working Group of the <b>Italian Gas Committee</b> (Comitato Italiano Gas, CIG) on methane emissions and in a CEN Working Group.</p>	<p>Snam will continue its active participation to the international Working Groups and Associations, both at national and international level.</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 standardisation of comparable external methane reporting describe the activity you have taken.





2022 completed activity

2023 intended activity



Snam activities to reduce emissions, targets and achieved results are disclosed in our **Sustainability Report** and in our **Financial disclosure on Climate Change Report**, which can be downloaded from:

[https://www.snam.it/en/Investor\\_Relations/Reports/Annual\\_Reports/index.html](https://www.snam.it/en/Investor_Relations/Reports/Annual_Reports/index.html)

This report describes the Company's approach to climate change, the strengthening of its commitment to guiding its choices and initiatives towards a sustainable energy transition, towards achieving national and European decarbonisation targets. In particular, this document is drawn up in compliance with the recommendation of the "Task Force on Climate-related Financial Disclosures" (TCFD).

In 2022 Snam has been confirmed among globally recognised companies included in the "A- List" from **CDP** (formerly the Carbon Disclosure Project) one of the leading non-profit organisations for Carbon Disclosure assessing transparency in the disclosure of information by companies on climate change. This index selects companies that stand out globally for their commitment and transparency in combating climate change.

Snam also provide maximum disclosure on the main environmental, social and governance aspects through an **ESG scoreboard**, including, as already mentioned, methane reduction targets. The ESG scoreboard can be seen at:

[https://www.snam.it/en/Sustainability/strategy\\_for\\_future/esg\\_scorecard.html](https://www.snam.it/en/Sustainability/strategy_for_future/esg_scorecard.html)

Since 2020 Snam joins **OGMP 2.0** and is also currently participating to the OGMP Task Force which is in charge to update the Reporting Template.

In addition to the existing reports, emissions data will also be shared with OGMP, according to the requested Reporting Template.

Participation to the OGMP Task Force and to the CDP will continue also in 2023.

The publication of the Sustainability Report and Climate Change Report, will continue also in 2023.



## Methane Emissions

<p><b>Do you report absolute methane emissions within your sustainability report?</b> <i>If so provide link.</i></p>	<p>Yes <a href="https://www.snam.it/en/Investor_Relations/Reports/Annual_Reports/index.html">https://www.snam.it/en/Investor_Relations/Reports/Annual_Reports/index.html</a> (2022 Report not published yet)</p>
<p><b>Do you report a methane intensity within your sustainability report?</b> <i>If so provide link.</i></p>	<p>Yes. <a href="https://www.snam.it/en/Investor_Relations/Reports/Annual_Reports/index.html">https://www.snam.it/en/Investor_Relations/Reports/Annual_Reports/index.html</a> (2022 Report not published yet)</p>
<p><b>What are your organisation's total absolute methane emissions?</b> <b>Provide a figure in tonnes.</b> <b>Provide latest data publicly available.</b></p>	<p>17.037 tons of methane (2022 data). Carbon Footprint as CO<sub>2</sub> eq. evaluated with updated GWP of methane = 29,8</p>
<p><b>State your methodology.</b></p>	<p>To determine emissions, Snam developed in the 1990s its own methodology in co-operation with the US-Gas Research Institute and Radian, compliant with the European Marcogaz methodology, developed by the European Gas Industry. This methodology is integrated with a series of personalized emission factors determined through measures taken in field, on a representative sample of facilities, applying EN 15446 standard. Snam methodology is currently equivalent to a Tier 3 approach, according to IPCC guidelines, and the emission data quality corresponds to a level between 3 and 4, according to the OGMP 2.0 Reporting Framework.</p>
<p><b>State your reporting boundary.</b></p>	<p>Emissions from operated assets, mainly gas transmission systems, underground storage sites and LNG terminal.</p>



<b>What are your organisation's methane intensity?</b> <b>Provide latest data publicly available.</b>	0,52 Tons/Km (2022 data)
<b>State your methodology.</b>	The KPI is defined as total methane emissions from operated assests per km of transmission network .
<b>State your reporting boundary.</b>	Total methane emissions from operated assests, mainly gas trasmission systems, underground storage sites and LNG terminal.
<b>Do you have a methane emission target?</b> <b>If yes, please state what it is, including the boundaries and methodology.</b> <b>If no, are you developing such a target? Please state your intended timeline.</b>	Yes  -55% total natural gas emission reduction from operated assets by 2025 compared to 2015 values.  -65% total natural gas emission reduction from operated assets by 2030 compared to 2015 values.  To recover every year at least 40% of natural gas that can be potentially emitted from maintenance activities of the transmission system (on average over the last five years).

