



METHANE  
GUIDING  
PRINCIPLES

# Methane Guiding Principles Signatory Reporting

TC Energy  
January 15<sup>th</sup> 2021





COMPANY: **TC Energy**

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

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

SENIOR REPRESENTATIVE: **Sue Flaman, Director Sustainability & Policy**



**Principle One:**  
Continually reduce methane emissions

2020 completed activity	2021 intended activity
<p>In 2020, TC Energy set a commitment to <b>enhance energy sector sustainability through research and development (R&amp;D) and innovation investments</b>. (Source: <a href="#">TC Energy Report on Sustainability</a>, page 10).</p> <p>We continue to advance investments in projects to reduce our <b>methane</b> and Greenhouse Gas (GHG) emissions. We encourage creative thinking within our teams, celebrate bold and progressive ideas through ideation and strategically invest in collaborative R&amp;D opportunities to improve our own performance – and that of our sector.</p> <p>Since 2019, we’ve made investments in next-generation technology and clean fuel research. <i>For a description of how we’re <b>enhancing energy sector sustainability with technology</b></i>, please refer to <a href="#">TC Energy Report on Sustainability</a>, page 14.</p> <p><i>For a description of other efforts to reduce <b>methane emissions from our activities</b></i>, please see: <a href="#">TC Energy CDP Climate Change</a> (C-EU4.6, page 27 and C-OG4.6 and C-OG4.7, both on page 28).</p> <p><i>For names of the standard, protocol or methodology we have used to collect activity data and calculate emissions</i>, please see: <a href="#">TC Energy CDP Climate Change Report</a> (C5.2, page 29).</p>	<p>TC Energy has been managing, tracking and optimizing the emissions generated by our own facilities and assets for decades.</p> <p>To this end, TC Energy is diligently investigating and advancing the deployment of <b>methane capture and injection technologies</b>, including capturing dry gas seal primary vents; reconfiguring yard pipeline infrastructure or utilizing mobile units to capture natural gas that would otherwise be released during a blowdown event and re-inject it into the pipeline. (Source: <a href="#">TC Energy CDP Climate Change</a>, C2.4a, page 17).</p>



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

2020 completed activity	2021 intended activity
<p>For 2019, total <b>methane</b> portion of Scope 1 emissions (tonnes CH<sub>4</sub>) is 70,569 (Source: <a href="#">TC Energy ESG Data Sheet</a>, SASB EM-MD-110a.1 indicator (page 15))</p> <p>For a more granular breakdown of our 2019 methane emissions data, please refer to <a href="#">TC Energy CDP Climate Change</a>, C7, page 38).</p> <p>TC Energy calculates its GHG emissions using a combination of methods required by various regulations in the different jurisdictions where we operate. Annual reported emissions will continue to be adjusted based on legal entity ownership, as of year-end (December 31), as disclosed in our Annual Report. Third-party verification of GHG calculations, including use of emission factors, are completed on several assets. For more detail, please see: <a href="#">TC Energy CDP Climate Change</a>, C10.1a, page 49.</p>	<p>As an organization with diverse businesses in natural gas and liquids transportation and storage and power generation, we are evolving to support the world’s future energy demands. We continue to advance investments in projects displacing coal-fired electricity generation, reducing <b>methane</b> and GHG emissions, expanding renewables and supporting critical research.</p> <p>Today we face the challenge of meeting the world’s growing energy requirements through practical, economic and achievable solutions without compromising the ability of future generations to meet their needs. We continue to work with policymakers and industry peers to provide the framework for innovation and technology development to meet this challenge.</p>



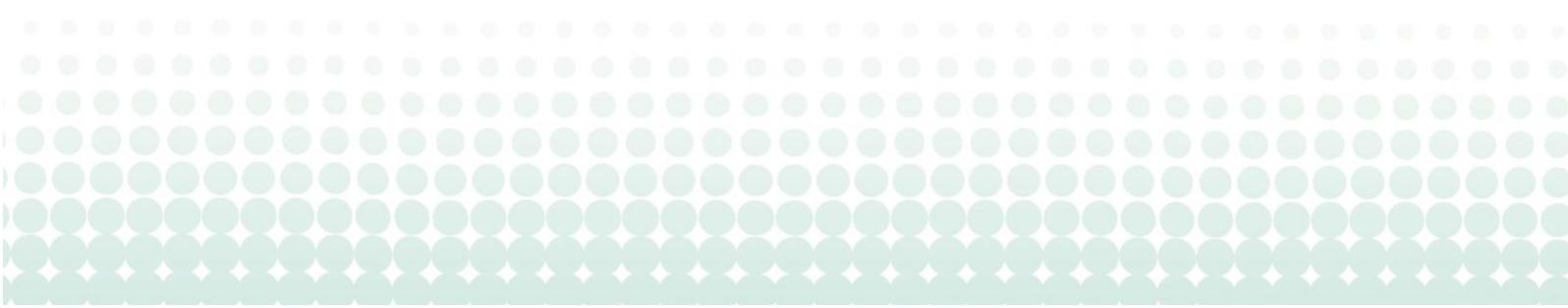
Does your organisation report methane intensity?  
If so, please specify the intensity.

2020 completed activity	2021 intended activity
<p>TC Energy's methane emissions are 0.0050% of total natural gas and hydrocarbon throughput. (Source: <a href="#">TC Energy CDP Climate Change</a>, C-OG6.13, page 38).</p> <p>The <a href="#">ONE Future coalition</a> – of which TC Energy is a Transmission &amp; Storage (T&amp;S) member – is comprised of some of the largest natural gas production, gathering &amp; boosting, processing, transmission &amp; storage and distribution companies in the U.S. and represents approximately 15% of the U.S. natural gas value chain. <b>The coalition registered a 2019 methane intensity number of 0.334% - beating its one percent goal by 67%; T&amp;S companies registered a methane intensity of 0.11% vs. goal of 0.30% - beating its goal by 63%.</b> The 2019 results reflect reporting from 24 of ONE Future's member companies; even with an additional seven companies reporting, year-to-year <b>methane</b> intensity remained flat; each sector was able to meet its goal, demonstrating that the natural gas industry can minimize <b>methane</b> emissions and increase production and throughput while supplying much needed energy to the U.S. and around the globe. Please refer to the following document for further details: <a href="#">ONE Future 2019 Methane Emission Intensities - Progress Report</a>.</p>	<p>In Canada, TC Energy has been completing Leak Detection and Repair (LDAR) surveys at compressor stations on an annual basis and meter stations every three years. Starting in 2020, these LDAR frequencies will increase to three times a year for both the compressor and the meter stations per federal and provincial methane regulation requirements. While valves are excluded from this initiative, per regulatory guidance, TC Energy will complete valve surveys twice a year. (Source: <a href="#">TC Energy CDP Climate Change</a>, C-OG4.7a, page 28).</p>



## Do you have a methane emission target?

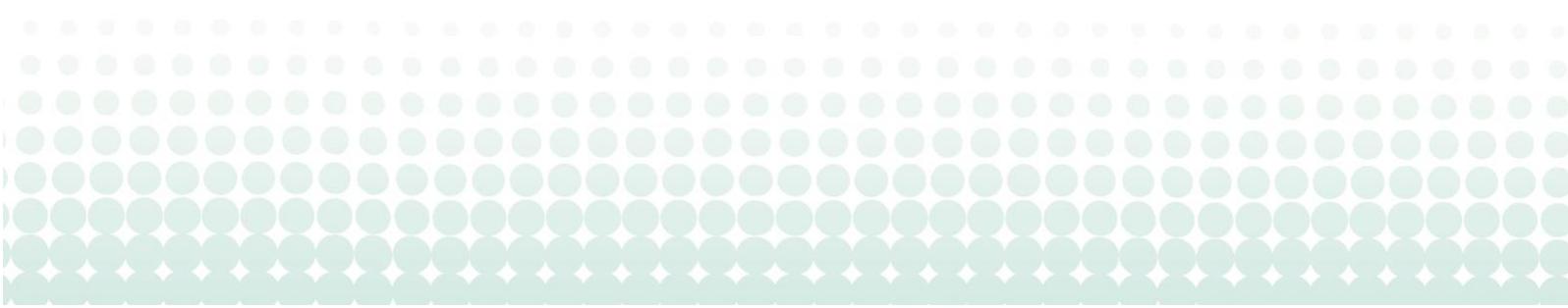
2020 completed activity	2021 intended activity
<p>In 2020, TC Energy set a commitment <b>to contribute to global efforts to reduce climate change, including setting GHG emission reduction targets.</b> (Source: <a href="#">TC Energy Report on Sustainability</a>, page 17).</p> <p><i>For details of our absolute emissions and emissions intensity, please refer to <a href="#">TC Energy CDP Climate Change</a> question C4.1a (page 20) and C4.1b (page 22).</i></p> <p>We are committed to minimizing the environmental impact of pipelines throughout the entire pipeline lifecycle. We have been actively engaged in reducing <b>methane</b> emissions for several decades developing and implementing new practices and technologies to reduce fugitive emissions during routine operations and maintenance. <i>For details regarding our commitment to <b>methane</b> reduction emissions, please refer to <a href="#">TC Energy CDP Climate Change</a> question C-OG4.2c (page 25).</i></p>	<p><b>Toward net zero:</b> We recognize that many companies inside and outside our industry are setting GHG reduction targets, including net zero GHG emission pledges. While we haven't set such a target yet, this doesn't mean that we don't appreciate the importance of climate change. We are not a company that takes making commitments lightly and are working internally to understand what our path to net zero could look like. (Source: <a href="#">TC Energy Report on Sustainability</a>, page 17).</p> <p>We are doing our due diligence to identify potential paths to net zero GHG emissions by 2050 for our operations. As with all our commitments, we want to make sure that we have a clearly defined, achievable and measurable path to the goal. You can expect to see further information about our roadmap in 2021. (Source: <a href="#">TC Energy Report on Sustainability</a>, page 5).</p>



## Principle Two:

### Advance strong performance across the gas supply chain

2020 completed activity	2021 intended activity
<p>TC Energy engages value chain partners in various ways to ensure the interests and concerns of its stakeholders are heard. (C12.1d, page 58).</p> <p>We continue to shape industry best practices and technology development through our strategic involvement in various research and innovation-related industry associations and initiatives. Some of these partnerships include:</p> <ul style="list-style-type: none"> <li>• The Pipeline Research Council International (<a href="#">PRCI</a>);</li> <li>• The American Gas Association (<a href="#">AGA</a>); and</li> <li>• The Intelligent Pipeline Integrity Program (<a href="#">iPipe</a>).</li> </ul> <p>TC also participates in Petroleum Technology Alliance Canada (<a href="#">PTAC</a>), and Canadian Energy Pipeline Association (<a href="#">CEPA</a>) committees. Both organizations emphasize industry sharing of best practices learned with a focus on <b>methane</b>, and shared response to government agencies regarding upcoming regulations. (Source: <a href="#">TC Energy CDP Climate Change</a>, C-OG4.6, page 28).</p>	<p>TC Energy is committed to minimizing the environmental impact of pipelines throughout the entire pipeline lifecycle and have been actively engaged in reducing <b>methane</b> emissions for several decades as a driving force in the pipeline industry on developing and implementing new practices and technologies to reduce fugitive emissions during routine operations and maintenance.</p> <p>We are a signatory to the <b>Methane Guiding Principles</b> (MGP). These principles focus on priority areas for action towards the reduction of <b>methane</b> emissions across the natural gas value chain.</p> <p>As a signatory to the MGP we have committed to hosting a best-in-class <b>methane</b> emission reduction workshop with industry peers in 2021. (Source: <a href="#">TC Energy Report on Sustainability</a>, page 17).</p>



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

2020 completed activity	2021 intended activity
<p>In 2020, we developed common approaches for tracking and evaluating GHG emissions across our operations, ensuring our reporting reflects the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. We live by a simple philosophy of “what gets measured, gets done.” This work allows us to better understand our achievements, gaps and how we’ll bridge them. (Source: <a href="#">TC Energy Report on Sustainability</a>, page 7).</p> <p>We also developed an in-house Emissions Management Application within SAP (EMA- SAP Tool) to support the LDAR program for Canada Gas Operations. The Application Program Interface (API) between SAP and our external vendor databases automatically extract all necessary leak data (pictures, video, text descriptions) into EMA/SAP triage. We use this tool to evaluate all leaks and automate the generation of work orders to operations departments for repair, within two business days. This sets up our field personnel for success to achieve regulatory repair timeline requirements (within 30 days). (Source: <a href="#">TC Energy CDP Climate Change</a> C4.3c, page 26 and C-OG4.7a, page 28).</p>	<p>We are investing in new technology in our operations to improve tracking of our natural gas pipeline fugitive emissions data at valve sites, meter stations and compressor stations. The technology will improve operations and regulatory reporting activities resulting in improved ability to plan maintenance activities. (Source: <a href="#">TC Energy CDP Climate Change</a>, C-OG4.2c, page 25).</p> <p>In Canada, initiatives to reduce methane emissions include pilot projects for implementation of two dry gas seal projects. While the technology is still in development, TC Energy is currently the only Canadian company to employ this specific technology and our plan is to have them in service, at sites to be determined, starting 2021. (Source: <a href="#">TC Energy CDP Climate Change</a>, C-OG4.2c, page 25).</p>



**Principle Four:**

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

2020 completed activity	2021 intended activity
<p>TC Energy supports <b>methane</b> regulations that standardize emission reduction requirements across our assets jurisdictionally and minimize duplicative regulation.</p> <p><i>For a full list of engagement in activities (by issue) that could either directly or indirectly influence public policy on climate-related issues through engagement with policy makers, trade associates, funding research organizations and others, please see: <a href="#">TC Energy CDP Climate Change Report</a> (C12.3 and C12.3a, page 59).</i></p> <p>In the USA, TC Energy has been an active participant in the US EPA Natural Gas STAR program since 2016, which consists of exploring potential <b>methane</b> reduction opportunities in conjunction with the EPA. TC Energy also participates in the One Future coalition, whose members, using US EPA approved reporting protocols, work together to voluntarily reduce <b>methane</b> emissions across the natural gas value chain up to 1% or less by 2025.</p> <p><i>For detail, please refer to <a href="#">TC Energy CDP Climate Change</a> question C4.1b (page 24).</i></p> <p><i>For examples of how we are partnering with governments in Canada and Mexico on technology development, please see: <a href="#">TC Energy CDP Climate Change Report</a> (C4.3c, page 26).</i></p>	<p>Our Risk Management teams continuously refine the company’s activities that may influence climate policy. This group provides input from their experience and expertise to inform policy response strategies and ensure consistency. The team includes members of corporate groups, such as Environment, various stakeholder relations teams, Legal, Regulatory Services, and representatives from business segments.</p> <p>We own assets and have business interests in a number of regions subject to GHG emissions regulations, including GHG emissions management and carbon pricing policies. Across North America there are a variety of new and evolving initiatives in development at the federal, regional, state, and provincial levels aimed at reducing GHG emissions. We actively monitor and submit comments to regulators as these new and evolving initiatives are undertaken.</p> <p><i>For a description of how TC Energy defines short-, medium- and long-term time horizons, please see <a href="#">TC Energy CDP Climate Change Report</a>, C2.1a , page 5.</i></p> <p><i>Further, for details on how we use scenario analysis for managing for the energy transition (including shifts in policy change), please reference <a href="#">TC Energy Report on Sustainability</a>, page 12.</i></p>



## Principle Five: Increase transparency

Historical completed activity	2021 intended activity
<p>In 2020, we refreshed our material topics (issues that are important to stakeholders as they make decisions about our organization) and set long-term sustainability commitments. Our 10 new sustainability commitments are grounded in the United Nations Sustainable Development Goals and our priority is to provide meaningful Environment, Social, Governance (ESG) information, consistent with Sustainability Accounting Standards Board (SASB) recommendations and the TCFD framework.</p> <p>Published information about our organization’s response to climate change and GHG emissions performance for the 2019 reporting year can be found here:</p> <ul style="list-style-type: none"> <li>• <a href="#">TC Energy CDP Climate Change Report</a></li> <li>• <a href="#">TC Energy Report on Sustainability</a></li> <li>• <a href="#">2019 Annual Report</a></li> <li>• <a href="#">2020 Management information circular</a></li> <li>• <a href="#">ESG Data Sheet</a></li> <li>• <a href="#">Materiality Assessment</a></li> <li>• <a href="#">TDFC Alignment Table</a></li> <li>• <a href="#">SASB Alignment Table</a></li> </ul>	<p>We expect to publish a Report on Sustainability and ESG Data Sheet in 2021.</p> <p>In 2021 and beyond, to deliver on our commitment to <b>further integrate sustainability into our strategy, management decision-making and performance tracking and assessment</b>, and demonstrate a focus on concise, transparent and meaningful disclosure on how we manage our business’ ESG goals, we will:</p> <ul style="list-style-type: none"> <li>• Set targets for every commitment; and,</li> <li>• Measure and demonstrate progress</li> </ul>



## Commentary:

2020 data is not currently available. The information reported in '2020 completed activity' represent 2019-reported activity.

**FORWARD-LOOKING INFORMATION:** This questionnaire response contains certain information that is forward-looking and is subject to important risks and uncertainties (such statements are usually accompanied by words such as "anticipate", "expect", "believe", "may", "will", "should", "estimate", "intend" or other similar words). Forward-looking statements do not guarantee future performance. Actual events and results could be significantly different because of assumptions, risks or uncertainties related to our business or events that happen after the date of this presentation. Our forward-looking information in this questionnaire response includes statements related to the future growth of our core businesses, among other things. Our forward-looking information is based on certain key assumptions and is subject to risks and uncertainties, including but not limited to: our ability to successfully implement our strategic priorities and whether they will yield the expected benefits, our ability to implement a capital allocation strategy aligned with maximizing shareholder value, the operating performance of our pipeline and power and storage assets, amount of capacity sold and rates achieved in our pipeline businesses, the amount of capacity payments and revenues from our power generation assets due to plant availability, production levels within supply basins, construction and completion of capital projects, cost and availability of labour, equipment and materials, the availability and market prices of commodities, access to capital markets on competitive terms, interest, tax and foreign exchange rates, performance and credit risk of our counterparties, regulatory decisions and outcomes of legal proceedings, including arbitration and insurance claims, our ability to effectively anticipate and assess changes to government policies and regulations, including those related to the environment and COVID-19, competition in the businesses in which we operate, unexpected or unusual weather, acts of civil disobedience, cyber security and technological developments, economic conditions in North America as well as globally, and global health crises, such as pandemics and epidemics, including the recent outbreak of COVID-19 and the unexpected impacts related thereto. You can read more about these factors and others in the MD&A and in other reports we have filed with Canadian securities regulators and the SEC, including the MD&A in our 2019 Annual Report and in our most recent Quarterly Report. As actual results could vary significantly from the forward-looking information, you should not put undue reliance on forward-looking information and should not use future-oriented information or financial outlooks for anything other than their intended purpose. We do not update our forward-looking statements due to new information or future events, unless we are required to by law.