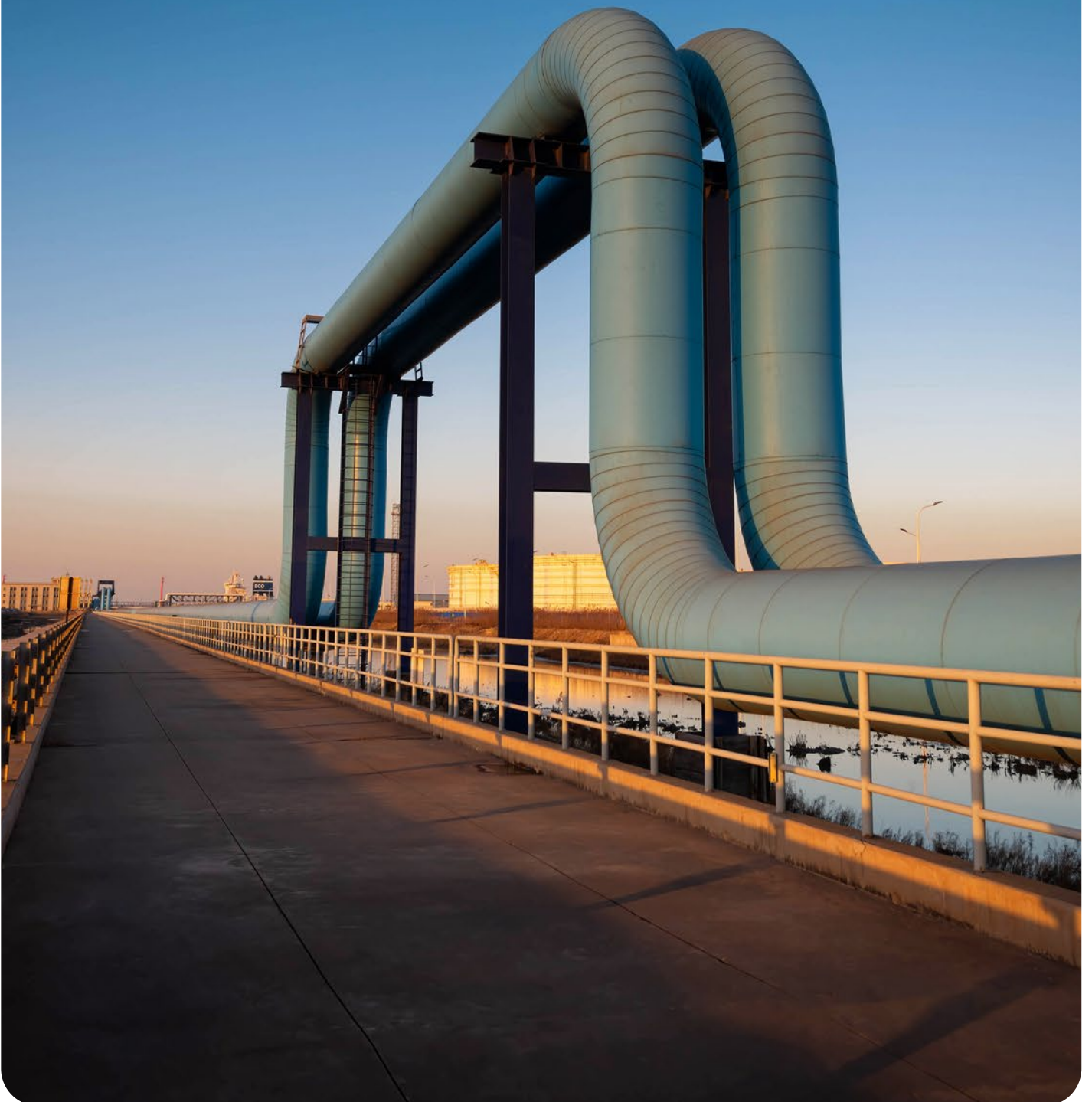


# CLIMATE INVESTMENT: GHG IMPACT METHODOLOGY



## Background

Climate Investment (CI), a specialist decarbonization investor, has been using Greenhouse Gas (GHG) impact estimation in its investment process since its incorporation in 2016. CI has formalized its GHG impact quantification and reporting approach and aligned it with industry best practices via Project Frame. This document summarizes CI's GHG Impact Methodology.

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# 1. Introduction

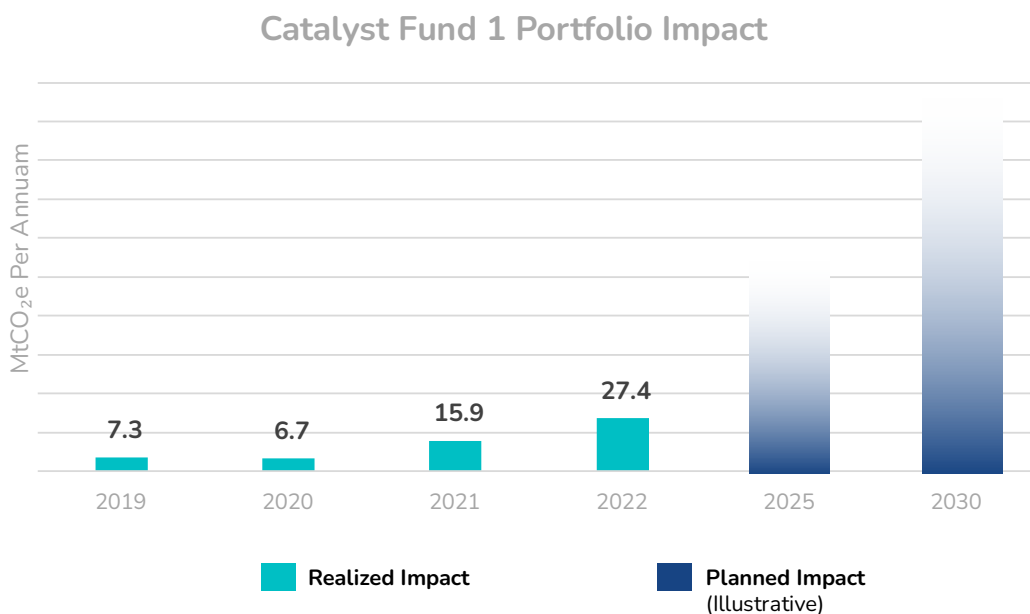
## 1.1 Purpose of this Paper

Climate Investment (CI) is an independently managed organization founded by members of the Oil & Gas Climate Initiative (OGCI). We made our first investment in 2017 through our inaugural Catalyst Fund I and are now investing out of our second fund the Decarbonisation Acceleration Fund. This paper outlines Climate Investment's methodology to estimate and forecast our investments' greenhouse gas (GHG) impact. It provides details on how we track and report the impact of our portfolio, from pre-investment activities to post-investment monitoring and assessment.

## 1.2 Our Commitment to Climate Impact

CI focuses on accelerating GHG reduction through strategic investments in innovative climate solutions. CI's Catalyst Fund 1 aims to deliver more than 100 million tonnes of realized CO<sub>2e</sub> impact annually by 2030 through its portfolio. Estimating GHG impact is a cornerstone of our investment process. It allows us to assess the ability of companies to reduce emissions and select the most promising for investment.

Figure 1. CI "Catalyst Fund 1" Historic and Targeted Impact



### 1.3 What is GHG *Impact*?

We differentiate between GHG *footprint* and GHG *impact*.

GHG *footprint* refers to the estimation of the operational GHG emissions of an organization, including emissions from their direct operations, such as on-site energy use (Scopes 1 & 2), plus indirect emissions from their supply chain and products (Scope 3). Footprint looks at the organization and its supply chain and does not consider how this company's products or services can help reduce or avoid the emissions of other entities. At CI, while we track<sup>1</sup> our own emissions footprint as a manager and those of our portfolio companies, our major focus is on the impact of our investments.

GHG '*Impact*' refers to the reduction of direct or indirect GHG emissions from using a new product or service when compared to a defined status quo or incumbent. This change can include GHG emissions that are avoided, reduced, recycled, or stored when compared to a baseline scenario. *For example, CI portfolio company Norsepower's Rotor Sails results in lower emissions from a ship or ferry compared to one where the innovation was not used.* Delivery of impact is central to CI's mission, and CI links employee remuneration to achieving the firm's impact targets.

There are currently no formal reporting standards or requirements for this kind of GHG impact, which is sometimes known as "Scope 4". CI co-founded a peer-to-peer group named Project Frame to define and align methodologies for impact quantification. CI proactively contributes to Project Frame - which now interacts with close to 300 private investment funds across Private Equity and Venture Capital - and aligns with its methodologies. More information on Project Frame can be found at <https://projectframe.how/>.

## 2 Our Approach to GHG Impact Quantification

### 2.1 Overview of our Methodology

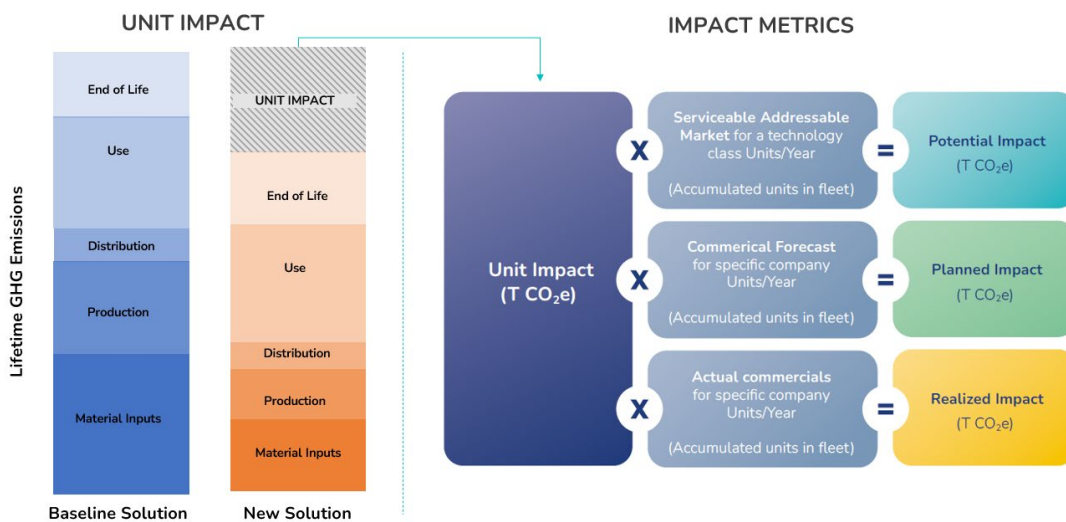
At the simplest level, GHG impact is focused on how a new technology, business model or solution can reduce the emissions of an existing "baseline" solution. Our calculations are based on the concept of unit impact. The unit impact quantifies the difference in emissions between a baseline solution and a new solution at the most granular level, i.e. one unit of

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<sup>1</sup> More details of CI's GHG footprint are shared in our [impact report](#).

product or service. This concept is shown in the left panel of Figure 2, where all the components of the emissions of the new solution are compared against the incumbent; the difference being the unit impact.

Figure 2: The basic impact methodology



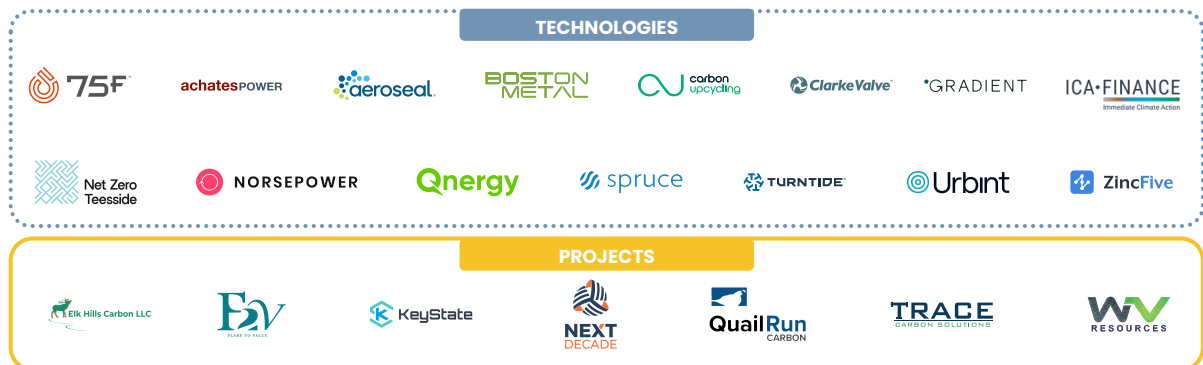
The unit impact is then used to calculate total impact of the entity, whether it be the actual impact delivered (*realized impact*), a projection of impact for an individual company or a solution in the future (*planned impact*). We also introduce a third concept: *potential impact*, which focuses on the impact of a general technology class. Potential Impact is the impact a climate technology could have based on a standardized growth trajectory that assumes the proposed solution takes over the Serviceable Addressable Market (SAM). It is often used for very early-stage technologies to assess the overall potential of a new innovation class. A good example is to consider the potential impact of EVs as a technology class relative to the planned impact of one EV player (e.g. BYD) within the market.

## 2.2 Understanding Different Types of Impact

In our approach to GHG impact assessment, we align with Project Frame’s recommendation to categorize solutions based on their 'completeness' in contributing to GHG reduction. This concept of completeness is central to understanding each solution's role within the broader ecosystem of climate impact solutions. It's important to recognize that GHG impact is rarely the result of a singular solution but rather a collective effort of multiple components and processes. At CI, we seek investments in solutions whose impact is significant and as direct as possible.

## Categorizing our Portfolio by Impact Type

1. **Direct Product Solutions** are solutions that can be utilized independently and have a direct impact on GHG emissions. They are often stand-alone products, projects or technologies that can be directly linked to emissions reductions. Examples include a more efficient motor, a heat pump, or a carbon capture and storage project. Each product in this category is a complete solution in itself, capable of delivering measurable GHG impact upon deployment.



2. **Direct Component Solutions** are components or subsystems that are integral to the functionality of a larger system and significantly contribute to its overall GHG impact. Although not complete solutions alone, these components play a crucial role in reducing emissions. An example would be a CO<sub>2</sub> capture technology; it plays a role in the CCUS chain, but you also require transportation and storage to complete the impact. The GHG impact of these components is context-dependent and varies based on how they are integrated into the final product.



3. **Facilitating/Enabling Solutions** indirectly contribute to GHG reductions by enhancing the effectiveness of direct product or component solutions or by creating conditions that facilitate emissions reductions. In our portfolio, technologies for methane leak detection are facilitators because they enable the identification and redress of methane emissions.



## 2.3 Further Descriptions of Impact

In addition to the categories above, at CI, we add a further descriptor to our impact evaluation, which describes how the GHG is “saved”. This refinement allows us to tailor our impact assessment methodology to the specific characteristics of each technology or solution, ensuring a more precise and relevant evaluation of its GHG impact potential.

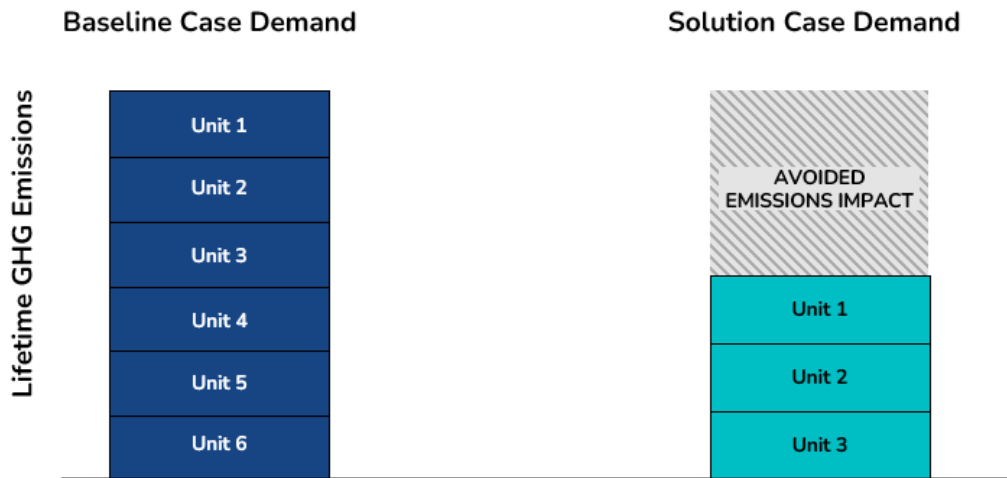
These categories are:

1. **Avoided Emissions Solutions:** innovations that lead to a direct decrease in GHG emissions by replacing or reducing the need for high-emission activities (e.g. ride sharing)
2. **Reduced Emissions Solutions:** technologies or practices that lower the emissions intensity of existing processes or products, thereby reducing the overall emissions per unit of output (e.g. a high-efficiency motor)
3. **Recycled Emissions Solutions:** Solutions that capture GHG emissions and repurpose them into other useful forms, effectively preventing these emissions from entering the atmosphere (e.g. using CO<sub>2</sub> in concrete)
4. **Stored Emissions Solutions:** Technologies or methods that capture and sequester GHG emissions, such as CO<sub>2</sub>, preventing their release into the atmosphere for long periods (e.g. geologic carbon sequestration)

## 3 Methodologies for GHG Impact Calculation

### 3.1 Methodology for Avoided Emissions

Avoided emissions cause an immediate drop in GHG emissions by removing or lowering demand for the primary driver of the polluting activity. The emissions from individual units contributing to the demand typically stay unchanged. This concept is illustrated in the chart below:



CI's portfolio includes companies that avoid emissions in a variety of sectors. For example, in transport ([OnTruck](#)), industrial energy efficiency ([Metron](#), [Fero Labs](#)), commercial building efficiency ([75F](#), [Turntide](#)), and power and gas utility networks ([Urbint](#)).

An illustration of an 'avoid' solution is that of a ride-sharing service that reduces the total number of miles driven in private vehicles. An example from CI's portfolio is OnTruck. OnTruck's solution optimizes logistics and reduces the miles trucks travel using their system, avoiding the emissions of travelling the extra distance. This is distinct from the impact of a more efficient engine or electrification that reduces the GHG intensity of each mile which would be "reduce" in CI's categorization.

The complexity in this category arises from understanding the counterfactual – i.e., the emissions trajectory without the new technology. Companies like Fero Labs measure pre-implementation baselines, which enables the use of clear datasets for estimating GHG impact.

### 3.2 Methodology for Reduced Emissions

Companies that reduce emissions improve the GHG intensity of products or services without affecting the primary driver (or demand) causing the emissions.

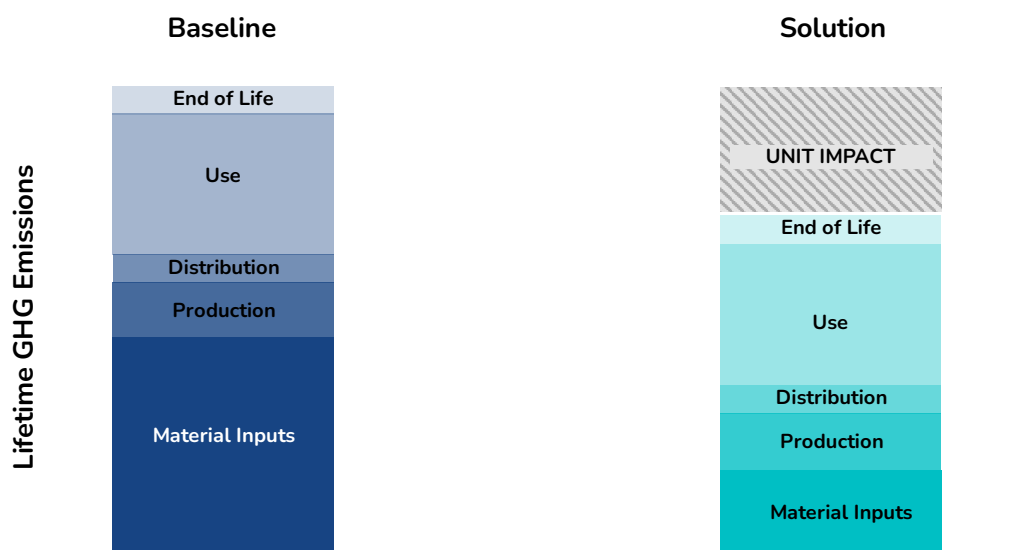
This category breaks into two further categories:

- a) A technology or service which is more efficient or has a lower GHG footprint than the technology it replaces
- b) Technologies that detect and measure GHG emissions that are then mitigated by the emitter.



**a. Impact of a technology or service which is more efficient or has a lower GHG footprint than the incumbent.**

A classic example of a ‘reduce’ company would be one changing out gas-fired residential heating systems with electric heat pumps, such as our investment in [Gradient](#). The CI portfolio has a range of other technologies in this category, including transport ([Achates](#), [Norsepower](#)), steel ([Boston Metal](#)), cement and concrete ([Solidia](#)), oil and gas ([Qnergy](#), [Clarke Valve](#)), and battery storage ([ZincFive](#)). This type of solution is typically a direct product or component as the technology drives the efficiency gains over the baseline.



**b. Technologies that detect and measure GHG emissions (or provide other services) that enable emitters to find and fix fugitive emissions**

This methodological approach was developed around methane detection, which is a critical component in CI’s portfolio. However it would equally apply to other GHG emission detections; such as CO<sub>2</sub>. This type of impact falls under Project’s Frame’s facilitator/enabler category. Methane detection enables operators to mitigate leaks that would have previously gone unnoticed for extended periods. However, detection alone does not fix the leaks and relies upon further operator action to do so. CI currently has four investments in this space, which detect methane using different technologies such as satellites ([GHGSat](#)), aircraft ([Kairos Aerospace](#)), drones ([SeekOps](#)) and ground-based sensors ([Andium](#)). CI has also invested in [SensorUp](#), a platform integrating emissions data sources to offer a methane emissions management software. This impact category is the most complex to quantify, and CI has worked extensively with portfolio companies to develop a robust and conservative approach.

## Methane detection quantification illustrative steps

### Step 1 - Detection

The first step in the impact estimation process is to measure the methane emissions themselves. Methane detection companies combine the raw methane measurement with location and meteorological data to provide information on leak rates (e.g., in Kg per hour) by geographic location or asset. The basic emissions calculation processes are well-developed and peer-reviewed ([GHGSat](#) & [Kairos](#)). The companies also calibrate their sensors and measurements with both known and blind releases of methane. These studies provide confidence in the underlying data, although CI recognizes that there remains uncertainty that cannot be removed.

### Step 2 – Mitigation of observed leaks and confirmation of action

For an observed, measured emission to count toward realized impact, the portfolio company needs to communicate the measured emission to its owner and then confirm that the owner of those emissions took action to reduce or remove the emission from its operation. CI's portfolio companies share a survey with their customers to determine if the leak mitigation was due to their data.

Sharing a survey with customers is the preferred way to confirm mitigations, and companies are getting more sophisticated in managing and sharing the data surrounding detection and mitigation. Indeed, one of our latest investments, "[SensorUp](#)", offers data platforms to enhance the management of methane leak detection and repair, enhancing the interface between measurement companies and operators.

Where poor customer feedback exists, CI works with the portfolio companies to measure the absolute drop in emissions at the same sites over time and estimate the reduction of emissions based on measurement.

It is also important to note that if flaring is the mitigation action, the company must factor in the carbon dioxide emissions the flare creates.

### Step 3 – Quantification of enabled emissions reduction

Upon successful detection and verification of the leak's resolution, the next step entails quantifying the impact the detection company achieves. This process involves two distinct components: determining the baseline leak duration and defining the timeline for the impact attribution by the portfolio company.

The baseline scenario for methane detection is the length of time the leak would have lasted without the intervention of the detection company. Leaks do not go on indefinitely in the baseline scenario; in most countries, there are underlying inspection and leak detection regimes in place that we assume would eventually find the leaks. An assumption is made that, on average, the emission was avoided for half the time between its first detection and the assumed time it would have taken to find the leak in the underlying or previous inspection regime.

The mitigation start date is assumed to be the last positive leak observation date. Once the start date and mitigation and the length of mitigation based on the type of customer is established, the impact is allocated to the relevant reporting period.

### Step 4 – Systemic Asset Improvement

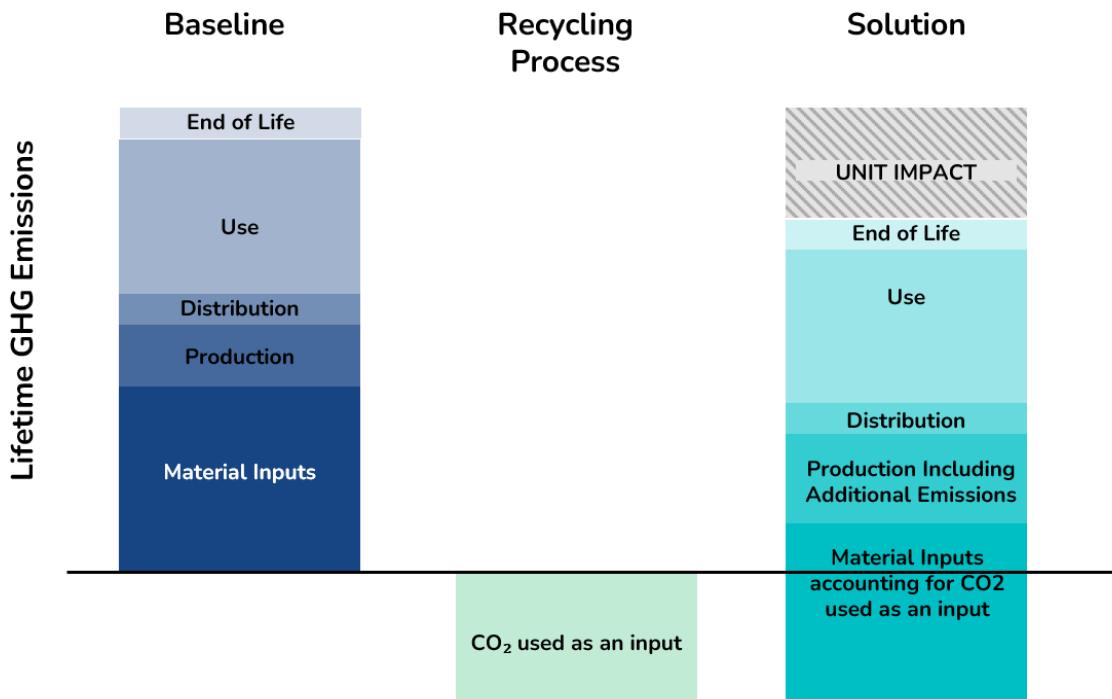
In addition to measuring directly "fixed" methane emissions, CI's methane detection companies can observe measurable underlying or systemic reductions in emissions in their clients' assets. Impact is delivered through increasing awareness of methane emissions in their clients and improving operational practices, leading to systemic emissions reductions. Although this is still a small impact relative to the "fixed emissions" (typically <10%), in 2021, Kairos began to report this impact where applicable and has continued to monitor this impact. CI will work with Kairos to fully operationalize this methodology so that it can be shared with other portfolio companies to help measure their impact in the future.

### 3.3 Methodology for Recycling Emissions

Technologies which permanently utilize or re-purpose GHG emissions are classified as ‘recycle’ impact. Typically, the recycling technology combines the GHG chemically or physically with another material to convert it into something reusable, in which the GHG is trapped, hence preventing the emissions from entering the atmosphere.

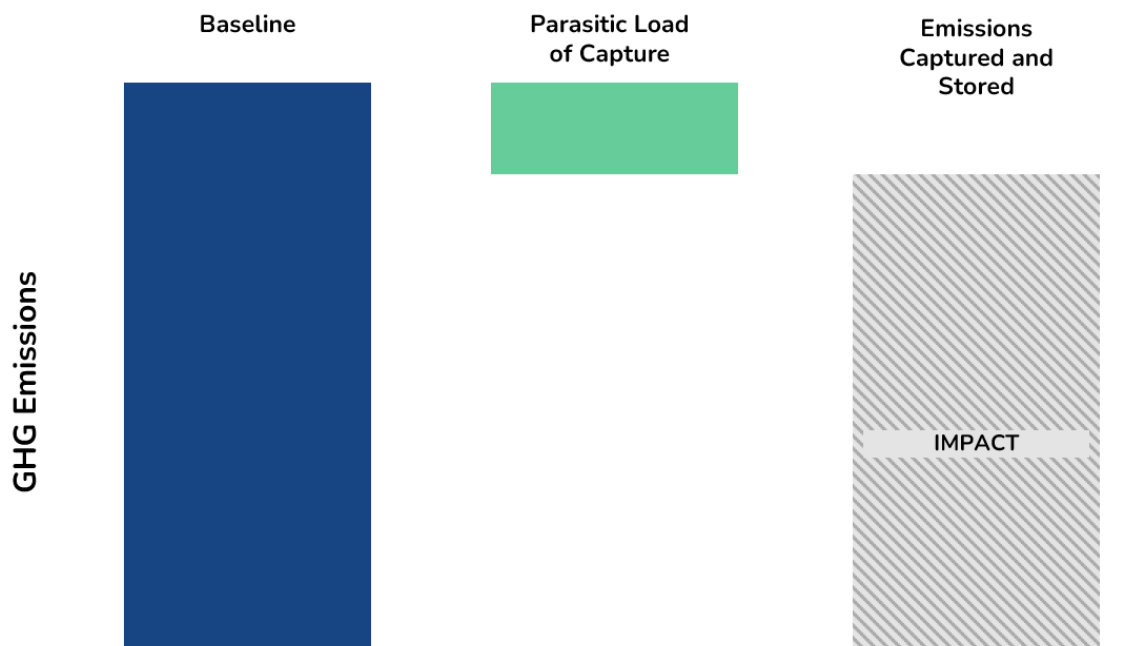
CI’s portfolio currently has methane and carbon dioxide-related investments in the ‘recycle’ category. The carbon dioxide investments are a polyol company ([Econic](#)) and two CO<sub>2</sub>/concrete curing technologies: [Solidia](#) and Carbon Upcycling Technologies ([Carbon Upcycling](#)). The methane investment is in a company that develops projects to capture flare gas for new purposes ([F2V](#)).

It's important to note that the recycling process introduces energy inputs and, consequently, new emissions. Adjustments must be factored into the unit calculation to account for any emissions stemming from the recycling process – illustrated in the chart below:



### 3.4 Methodology for Storing Emissions

Technologies or projects can deliver direct GHG emissions avoidance via capture and permanent storage. The basic methodology for the ‘store’ category is to quantify the captured and stored emissions; the emissions of the process used to capture emissions (known as parasitic load) are netted off.



Technologies and projects in the ‘store’ category typically assess their impact as a key aspect of their business case. They conduct internal calculations during their development process. CI will work with the portfolio company to ensure their calculations align with our methodologies.

CI’s portfolio includes technologies and projects in the ‘store’ category. The technology investment is in [Svante](#), whose technology captures carbon dioxide from flue gas. CI has invested in projects directly ([Net Zero Teesside](#), [Wabash Valley Resources](#), [Elk Hills Carbon](#), [Quail Run Carbon](#), [Next Decade](#), [KeyState](#)) along with project developers ([Trace](#)). These projects all involve carbon dioxide capture and storage in different industrial settings. As such, impact estimates are based on the project design and engineering estimates of the operational capacity of the project. For project developers like Trace, CI adds a probability of completion factor to give a risked view of the impact for each project in the developer's pipeline.

### 3.5 Detailed Impact Workflow

CI follows an impact workflow that aligns with Project Frame’s guidance, laying out a step-by-step process for quantifying GHG impact.



**Step 1 – Define Theory of Change:** Analyze how a proposed innovation can reduce GHG emissions throughout its lifecycle. We evaluate the product's entire value chain, from raw material sourcing and manufacturing to end-of-life disposal or recycling. This evaluation includes identifying the various points in the chain where emissions can be reduced and the degree of impact achievable. For instance, in assessing an electric vehicle manufacturer, we consider not only the direct emissions from vehicle operation but also the emissions from battery production and end-of-life battery disposal. We use the 'Effects Table' document to describe how a company influences emissions properly.

An example theory of change for an EV can be seen below:

	LCA Steps	Element of Impact	Theory of change	Baseline	Sector Affected	Technology Trend	Decrease / Increase
			Describe how this <b>element</b> is contributing to GHG emissions or atmospheric GHG levels	Describe the incumbent or status quo solution used as the reference for comparison	What Industry/Sector is associated with the emissions affected by this element?	Does the incumbent remain <b>constant, improve or decline</b> over the investment horizon (Static or Dynamic baseline?)	Describes the direction of emissions allowing for pros and cons to be considered:
Embedded	Raw Material Extraction	Element 1	Carbon footprint of raw materials used in battery	ICE vehicles that do not have large lithium-ion batteries	Mining	Improve	Increase
	Manufacturing & Processing	Element 2	Carbon footprint of making the battery	ICE vehicles that do not have large lithium ion batteries	Industry	Improve	Increase
	Transportation	Element 3	No change	Transportation from manufacturer to user remains the same	Transport		
Operating	Usage (Charging)	Element 4	Charging the electric vehicle from the grid has emissions related to it	ICE vehicle with no need to charge a battery	Power Generation	Improve	Increase
	Usage (Driving)	Element 5	The emissions per mile driven by an EV are much less carbon intensive than those driven by ICE vehicles	ICE vehicle	Transport -Road:	Improve	Decrease
End-Of-Life	Waste Disposal	Element 6	Battery end of life treatment	ICE vehicle with no need to recycle a large battery	Industry	Improve	Increase

**Step 2 – Define Unit:** Select a core functional unit that the business being analyzed can easily track and report. The basic unit of innovation should be comparable to the baseline it replaces. A baseline refers to the counterfactual scenario of emissions that would have occurred in the absence of the new climate solution. For instance, if a low-carbon steel producer creates one tonne of steel, this would be compared against the baseline of a tonne of steel made using a traditional blast furnace.

**Step 3 – Define Emissions per Unit:** Quantify the emissions associated with the innovative solution and the baseline (conventional) technology. This involves gathering and analyzing emissions data across the entire product or service lifecycle, including both direct and indirect emissions. We utilize a variety of data sources, such as technical reports from the companies themselves, third-party lifecycle assessments, and industry-standard emissions databases.

**Step 4 – Calculate Unit Impact:** Calculate the difference in GHG emissions per unit between the baseline technology and the innovative solution. This calculation provides a clear and quantifiable measure of the emissions impact attributable to the innovation. It’s a critical step in evaluating the efficacy of the innovation in reducing GHG emissions compared to existing solutions.

**Step 5 – Incorporate Commercial Volumes:** Extend the unit impact analysis to a broader scale by incorporating the commercial volumes of the innovation. This means translating the per-unit emissions impact into total emissions impact based on actual or projected sales volumes or, in some cases, the operational fleet size. This approach allows us to estimate the real-world impact of the innovation as it scales up in the market.

**Step 6 – Report:** Annually, we collect data on the actual impact achieved by our investments and compare it against the targets set at the beginning of the year. This data collection is followed by a rigorous review process, where we ensure the accuracy and reliability of the reported data. Finally, the data undergoes a limited assurance review by a third party, adding a layer of credibility to our impact reporting.

**Step 7 – Refine and Update:** In response to the findings of the assurance review and any new developments in impact reporting standards or methodologies, we continually refine and update our approach. This ensures that our methodology stays relevant and accurate and incorporates the latest best practices in GHG impact assessment.

Through this workflow, we seek to ensure that our GHG impact assessments are robust, transparent, and aligned with the highest industry standards.

## 4 Realized Impact Reporting

We run an annual data collection and assessment process to prepare for our impact reporting. Key steps include:

**Developing annual targets** Every year, CI develops annual forecasts for each company in the Portfolio based on their latest financial projections and unit impact data.

**Monitoring performance** Progress on realized impact is monitored during the year. Each quarter, CI has an informal “check-in” with portfolio companies, and at the half-year point, receives first-half actuals from each portfolio company and makes any necessary adjustments to the full-year forecasts. This process allows the CI team to consider any further support a portfolio company may need to achieve its impact goals.

**Data Collection** Realized impact figures for the reporting year are generated in Q1 of the following year. The actual sales or installed capacity figures are taken from the investees. Once the impact is calculated, a meeting is held with each portfolio company to ensure that all received data is understood. This initial data is aggregated to the portfolio level. CI does not publicly report impact at the portfolio company level.

**Assurance** Before the impact data is published, the realized impact is subject to a limited assurance review with a third party. The 2022 reported realized impact was subject to Limited Assurance by EY.

## 5 Guiding Principles

This section outlines the guiding principles that inform CI's GHG impact quantification and reporting approach.

### 5.1 Climate Impact Focus

CI was established to deliver GHG impact, and our metrics have been dedicated to that focus. The methodology described in this report is only suitable for GHG impact quantification. However, CI considers and tracks broader ESG metrics as part of the requirements of our commitment to broader sustainability goals and the Principles for Responsible Investment (PRI); details can be found in our [Responsible Investment Policy](#).

### 5.2 Transparency and Accountability

Transparency and accountability are cornerstones of our GHG impact forecasting methodology. We understand the crucial role of clear communication and verifiable data in fostering trust and credibility in our impact assessments.

- **Open Communication:** We share the methodologies behind emissions reduction figures in our annual reporting. This openness allows stakeholders to understand and validate our approach.
- **Documentation and Verification:** All calculations and methodologies are well-documented. We conduct third-party reviews and audits to verify our impact calculations, ensuring our methods withstand rigorous scrutiny.
- **Consistency and Comparability:** Use standardized methodologies where possible to ensure consistency and comparability of GHG impact assessments across different investments and projects.

### 5.3 Ensuring Completeness and Materiality

The completeness and materiality of our impact assessments ensure we capture the full scope of an investment's impact on GHG emissions.



- **Focus on Material Impact:** We prioritize the most significant impact factors in our assessments, identifying and quantifying elements that substantially affect GHG emissions.
- **Lifecycle Consideration:** Our methodology includes a comprehensive view, considering the entire product or service lifecycle – from production to disposal or recycling. This approach ensures that we account for all relevant emissions sources and sinks.
- **Continuous Improvement:** Commit to continuously improving our forecasting methodologies through regular review, updates based on new information, and lessons learned from past assessments.
- **Adaptability and Flexibility:** Maintain a flexible approach that allows for the incorporation of new technologies, market changes, and regulatory developments, ensuring that our quantifications remain relevant and effective.

#### 5.4 Baseline Selection

Selecting an accurate baseline is critical to the integrity of our GHG impact forecasting. The baseline serves as the reference point against which the impact of the innovation is measured.

- **Sector Baselines:** As a policy we use industry average baselines which are relevant for the company being analyzed. This avoids a company making unsubstantiated claims that its product will displace the highest emitting marginal producer of the incumbent solution. The use of a different “non-average” baseline will only occur if company data can substantiate it that its products are not replacing the “average”.
- **Geographic Baselines** It is also important to consider geography when selecting a baseline. The geographical baseline chosen should align with the focus areas of the business being considered.
- **Static vs Dynamic Baselines:** A baseline can be either static, remaining constant over time, or dynamic, changing over time. The choice between the two depends on the variables analyzed. In cases with high-quality data on industry growth and trends in a rapidly changing sector, a dynamic baseline is appropriate. Conversely, if there is limited data on industry growth or the sector is expected to remain stable, a static baseline is sufficient. Impact analyses often involve multiple variables and may require a combination of dynamic and static baselines. At CI, we consistently update our baselines to incorporate current data and emerging trends.

## 5.5 Portfolio Impact Reporting & Attribution

When reporting publicly, we report on the total impact of our portfolio of investments – i.e., the sum of 100% share of the GHG reduction delivered by each company and project investment. We believe this is a clear and simple metric which avoids year-to-year fluctuations which could be driven by regular changes in the cap-tables of our investees. We do provide an analysis of our current equity-weighted impact in our impact report for comparison, but our focus is on measuring and improving the total impact of our portfolio. As a firm we continue to monitor guidance best practices for impact attribution particularly considering the potential challenge of attributing impact to different forms of investors (equity, debt, grants, etc.)

CI does not claim any of the GHG impact achieved by our portfolio companies as our own, nor can CI convert this impact directly into carbon credits. Our primary objective is to provide transparent and accurate reporting on the performance of our portfolio as a whole.

## 5.6 Global Warming Potential

CI reports impact in carbon dioxide equivalent or CO<sub>2</sub> equivalent. This metric measure is used to compare the emissions from various greenhouse gases based on their global warming potential (GWP) by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

CI uses GWP factors from the IPCC AR6 at the 100-year time frame. These can be seen below:

<b>Greenhouse Gas (GHG)</b>	<b>GWP – 100</b>
Carbon Dioxide	1
Methane (Fossil Origin)	29.8
Methane (Non-Fossil Origin)	27

## 5.7 Post Exit Reporting

CI's GHG impact targets are linked to the overall portfolio impact, which includes companies where CI has financially exited. We will continue to report on the realized impact of exited companies, subject to data access agreements negotiated during the exit process.

## 5.8 Low Carbon Procurement

In cases where companies assert that part of their impact comes from acquiring low-carbon inputs, like renewable energy, CI will credit this impact to the company if the low-carbon input is additional. For example, if new renewable energy capacity is constructed explicitly for the company's use. A depot for electric buses would be given credit for low-carbon procurement if the depot had specifically constructed renewable energy generation infrastructure; it would not be given credit if it was simply purchasing renewable energy from a utility provider.

CI would also give credit to a company for catalyzing low-carbon procurement. An example of catalyzing low-carbon procurement would be creating a market for the low-carbon fuel in question. For instance, if a project is the first in a region to procure responsibly sourced natural gas as an input into its process, it will be deemed catalytic and given credit.

## 5.9 Double Counting

CI has invested in companies that mitigate emissions within the same industry along the same value chain. In these situations, CI is diligent in ensuring that the reported realized impact does not double count mitigations. An example of this is methane mitigation; CI has companies that detect methane, which would not have been detected in the absence of the technology. These detected emissions are then mitigated. CI's detection portfolio sends surveys to their customers asking about leak mitigations. If a Kairos customer were to tell the company a leaky valve was replaced with a Clarke Valve, then CI would not report the impact from each company. Instead, it would be allocated to one company. This issue has not come up at this point; however, as CI's portfolio companies grow, it will likely become an occurrence. CI will be diligent to avoid double counting in high-risk areas such as methane detection and mitigation via close collaboration and detailed reporting from the portfolio companies.

## 5.10 Realized Impact Restatement Policy

Over time, a company's unit impact may vary, and errors in previously reported realized impact data might emerge. This could necessitate a re-evaluation of the realized impact for prior years. In such cases, CI should restate any previously disclosed figures if the change in impact for any company is greater than 10% and exceeds 0.1 MT CO<sub>2</sub>e.

## 6 Glossary

1. **Avoided Emissions:** The reduction in life cycle emissions between a baseline scenario and an alternate low-carbon product, service, or portfolio.
2. **Baseline Scenario:** The trendline of projected GHG emissions without a specific innovation or intervention, serving as a comparison against emissions from an innovation.
3. **ESG (Environmental, Social, and Governance):**
  - **Environmental Factors:** Issues related to the quality and functioning of the natural environment and natural systems.
  - **Governance Factors:** Issues related to the governance of companies and other investee entities.
  - **Social Factors:** Issues related to the rights, well-being, and interests of people and communities.
4. **Global Warming Potential (GWP):** A measure of how much heat a GHG traps in the atmosphere compared to carbon dioxide over a specific period, usually 100 years.
5. **Greenhouse Gas (GHG) Emissions:** Gases that absorb infrared radiation, trapping heat in the atmosphere. Key GHGs include carbon dioxide, methane, nitrous oxide, and others.
6. **GHG Impact:** The expected direct or indirect change in GHG emissions resulting from an innovation compared to a defined status quo or incumbent.
7. **LCA (Life Cycle Assessment):** A methodological framework for assessing the environmental impacts associated with all the stages of a product's life, from raw material extraction through materials processing, manufacture, distribution, use, repair and maintenance, and disposal or recycling.

8. **Low Carbon Procurement:** The process of acquiring goods and services with a lower carbon footprint, including actions that create new markets for low-carbon solutions or utilize additional renewable energy sources.
9. **Materiality:** The assessment of the relative importance of an issue (such as GHG emissions) to an organization's financial performance, operational efficiency, or sustainability goals.
10. **Planned GHG Impact:** The anticipated normalized annual reduction in GHG emissions expected from a project or innovation based on a forecasted scenario of its implementation and adoption.
11. **Potential GHG Impact:** The maximum normalized annual reduction in GHG emissions that could be achieved if a project or innovation is implemented and adopted on the broadest possible scale.
12. **Realized GHG Impact:** The actual normalized annual reduction in GHG emissions that occurs directly from a project or innovation, measured following its implementation.
13. **Responsible Investment:** The integration of ESG considerations into investment management and ownership practices based on the belief that these factors impact financial performance.
14. **Scope 1 Emissions:** Direct GHG emissions from sources controlled or owned by an organization.
15. **Scope 2 Emissions:** Indirect GHG emissions from the purchase of electricity, steam, heat, or cooling by an organization.
16. **Scope 3 Emissions:** Indirect GHG emissions from activities in an organization's value chain, not owned or controlled by the organization.
17. **Screening:** Applying filters to financial instruments based on predefined criteria, which may include ESG incorporation approaches like positive, norms-based, or negative screening.
18. **Total Carbon Emissions:** The total GHG emissions associated with a portfolio, expressed in tonnes of CO<sub>2e</sub>, based on company equity ownership.
19. **Unit Impact:** The normalized annual difference in GHG emissions per unit between the baseline technology and the innovative solution, quantifying the innovation's specific GHG impact annually.

## 7 Useful Documents

Document	Link
2022 Impact Report	<a href="https://www.climateinvestment.com/news/download-climate-investment-ci-s-corporate-and-impact-report-2022">https://www.climateinvestment.com/news/download-climate-investment-ci-s-corporate-and-impact-report-2022</a>
CI Responsible Investment Policy	<a href="https://cdn.climateinvestment.com/app/uploads/2023/08/Climate-Investment-Responsible-Investment-Policy-August-2023.pdf">https://cdn.climateinvestment.com/app/uploads/2023/08/Climate-Investment-Responsible-Investment-Policy-August-2023.pdf</a>
Project Frame	<a href="https://projectframe.how/">https://projectframe.how/</a>