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# A dictionary of key terms for your Net-Zero Journey

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# Introduction

The global warming, we are witnessing has led to huge risks for companies to consider but also **significant opportunities to exploit**.

The clean energy transition is happening now. Companies of all sizes have begun to take meaningful action to **reduce** their enterprise-wide **emissions** and establish more **sustainable** business processes.

To become more competitive, they have to act to not

be left behind in the **low-carbon future**.

This guide is for those companies that are just starting out on their sustainability journey. It offers a **dictionary** of most common terms and describes **key concepts** that companies need to understand to make the decisions and choices that work for their unique needs and **sustainability/decarbonization goals**.



# 1. Sustainability

## 1.1 What is sustainability?

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs.

The concept of sustainability has multiple definitions given by international organizations and researchers, which have changed over the years. Most definitions bring "sustainability" closer to a holistic approach that goes beyond environmentalism and includes other dimensions necessary to meet the needs of future generations: social and economic resources.

Following the original definition "to meet our own needs" in addition to natural resources, there are also necessary social and economic resources.

Sustainability is a set of ideas, attitudes, intentions, and behavior involving the strategic consideration of economic, environmental, and social resources for the success of current and future generations.

The global warming, we are witnessing has led to the growth of models of sustainable development inspired by respect for nature and people. Worldwide, energy use is by far the largest source of greenhouse gas emissions from human activity. Approximately two thirds of global greenhouse gas (GHG) emissions are related to fossil fuel use, and the massive amount of CO2 released into the earth's atmosphere, it is currently estimated at an average of 36.3 billion tons of CO2, 6% more than last year (2021).

In order to fight climate change and ensure a future for the planet and its people, most of the strategies developed involve reducing emissions through renewable energy and a non-carbon-based approach. Indeed, renewables-based generation reached an all-time high, exceeding 8,000 terawatt-hours (TWh) in 2021, a record 500 TWh above its 2020 level.

## 1.2 Three pillars of sustainability?

The 2005 World Summit on Sustainable Development (WSSD), organized by the United Nations in Johannesburg (South Africa), identified the three objectives of sustainable development, including environmental, social and economic development.

The concept of sustainability is thus linked to three "pillars" that make the development of economic activities and the protection of the environment compatible.

The first pillar is environmental sustainability, and it is based on the maintenance of ecological integrity, all of the Earth's environmental systems are kept in equilibrium, while natural resources are consumed by humans at a rate that they are able to replenish themselves.

The second is Economic Sustainability, which concerns the ability of an economic system to produce income and work in a sustainable manner, to maintain its independence and to have access to financial and other resources to meet its needs.

The last is Social Sustainability, that is, the ability to ensure that the conditions of human well-being are equitably distributed.

Universal human rights and necessities are attainable by all people, who have access to sufficient resources to keep their families and communities healthy and safe.

## 1.3 Climate Change

What's behind the rapidly increasing focus on sustainability among governments and businesses around the globe? In the last several decades we have witnessed how the long-standing predictions of climate scientists have become a reality. Our planet is warming and experiencing extreme weather events. From heat waves and fires to floods and rising sea levels, the climate change threat is impacting the food supply, wellbeing, health, and prosperity of ecosystems and communities globally. Going forward, we will continue witnessing change and increasing vulnerability. Therefore, it is so important to respond to the climate change crisis as a society and accelerate climate action in the next few years.

Worldwide, energy use is by far the largest source of greenhouse gas emissions from human activity. Approximately two thirds of global greenhouse gas (GHG) emissions are related to fossil fuel use, and the massive amount of CO2 released into the Earth's atmosphere is currently estimated at an average of 36.3 billion tons of CO2, 6% more than last year (2021).

Today, most of the strategies developed to fight climate change and make our planet more sustainable involve reducing emissions and transitioning to clean energy.

## 1.4 How does sustainability affect business?

In Focus on sustainability encourages organizations to think long-term and balance profitability with a positive effect on the environment and society instead of focusing on immediate returns. In the last few years, business and finance leaders around the world have been clear about the importance of sustainability and ESG for companies' long-term performance.

According to [Larry Fink](#), the CEO of BlackRock, the largest investment management firm in the world, "companies perform better when they are deliberate about their role in society and act in the interests of their employees, customers, communities, and their shareholders". In response to their stakeholder demand

companies have publicly committed to sustainability, set goals and targets, created sustainability strategies and programs, and have been reporting on their performance. Cutting GHG emissions to address climate change threat is an important sustainability action area for companies. Other elements of companies' sustainability programs depend on the industry and often include focus on energy efficiency, waste, sustainable supply chain, talent support such as fair pay, employee diversity and inclusion, and ethical corporate governance practices.

### 1.5 What are the United Sustainable Development Goals (UN SDGs)?

Launched in 2015, the 17 United Nations Sustainable Development Goals (SDGs) address global environmental, social and economic challenges, including climate change, environmental degradation, poverty and inequality.

The SDGs serve as a blueprint to how to achieve a sustainable future for everyone on the planet. Developed by the United Nations and ratified by global governments, SDGs have been endorsed by financial regulators and investors and have received broad support from civil society. Since their inception, many companies – including Enel – have enthusiastically adopted SDGs and have used them as an aspirational target.

Intensifying interest in corporate sustainability and ESG has brought attention to the role of the SDGs in helping manage risk and identify opportunities for growth and innovation for companies. More recently, the events in 2020 have highlighted our society's fragility and limitations in its ability to address future crises like climate change. There is now greater pressure on companies from their stakeholders, including investors, customers, employees, and NGOs, to be more transparent on sustainability issues. As a result, companies are doing more to align with the SDGs and report on their efforts. More recently, the events in 2020 have highlighted our society's fragility and limitations in its ability to address future crises like climate change. There is now greater pressure on companies from their stakeholders, including investors, customers, employees, and NGOs, to be more transparent on sustainability issues. As a result, companies are doing more to align with the SDGs and report on their efforts.

### 1.6 What is ESG?

In reaction to the evolving researches, demonstrating that environmental, social and governance (ESG) issues have important financial implications, investors have embraced ESG as part of their fiduciary duty.

Today, ESG criteria is used by investors to measure the sustainability of a company's operations. The integration of ESG factors into the investment process and decision-making has become a standard for better risk management and pursuit of opportunities. Today, leaders in the investment management space like BlackRock – the world's largest asset manager – even go as far as to make it clear that they are reallocating capital towards companies with robust ESG practices. In his 2022 annual letter to business leaders, BlackRock's CEO makes it clear that "in today's globally interconnected world, a company must create value for and be valued by its full range of stakeholders in order to deliver long-term value for its shareholders." With investors and other stakeholders increasingly focusing on ESG criteria, companies have started developing their corporate sustainability programs and strategies through the lens of ESG.

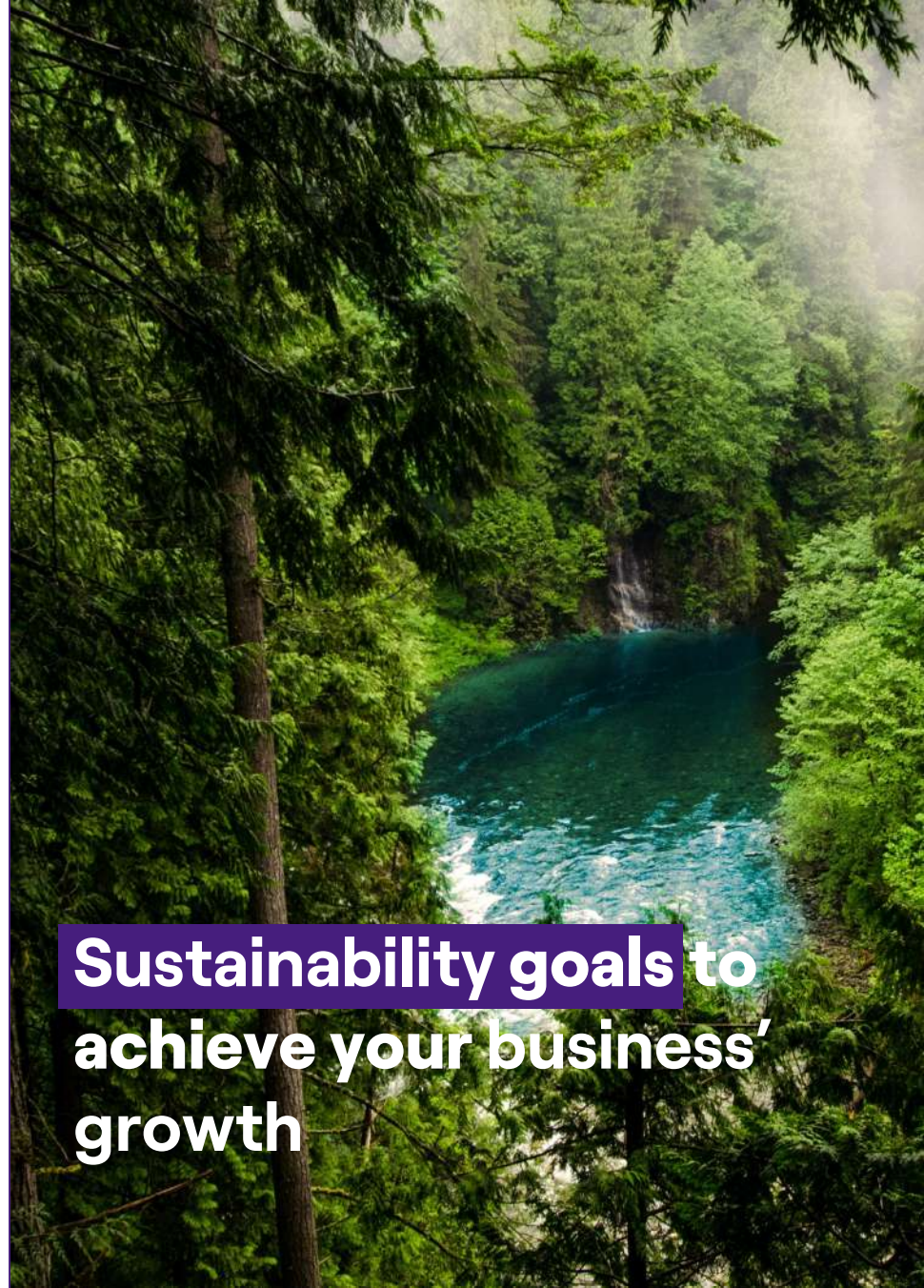


Environmental criteria examine how a company contributes to solving environmental challenges, including corporate policies that help evaluate and mitigate companies' climate change risk. Social criteria relate to how the company manages relationship with its employee, suppliers, customers and the communities in which it operates. Governance deals with a company's leadership, executive compensation, audits, internal controls, ethics, and shareholder rights.

In the last several years, sustainable investing has risen quickly to the top of investor and corporate agendas. However, it is not a new trend; it is a practice that dates back decades, or even hundreds of years. Based on moral criteria and shaped by religious beliefs, early sustainable investing used negative screens to avoid businesses that earned money through alcohol, tobacco, weapons or gambling.

The modern roots of sustainable investing can be traced to the defining events and the associated political and social movements, starting in the 1960s all the way to present times. In the United States, public discontent about the Vietnam War, civil rights and gender inequalities changed the way people thought about social responsibility. Increased activism broadened the dialog to disarmament, fair labor practices, and the environment. Fast forward several decades. In the last few years, the coronavirus pandemic heightened ESG awareness by highlighting our society's vulnerabilities, including the climate change threat

**Sustainability goals to  
achieve your business'  
growth**



An aerial photograph showing a winding asphalt road that snakes through a dense, lush green forest. The road has several sharp turns and loops, creating a complex path through the trees. The lighting suggests a bright day, with shadows cast by the trees.

# Understanding Net-Zero and Decarbonization definitions

## 2. Decarbonization and Net-Zero definitions

### 2.1 What is decarbonization?

Decarbonization is the term used to describe the removal or reduction of carbon dioxide (CO<sub>2</sub>) emissions resulting from human activity in the atmosphere. Decarbonization also refers to measures through which a business, another organization or a government can reduce its carbon footprint or generally greenhouse gas emissions. The goal is to ultimately eliminate carbon emissions by switching to renewable energy sources like wind or solar.

### 2.2 Why is decarbonization internationally relevant?

In response to the Paris Agreement adopted in 2015 by members of the United Nations Framework Convention on Climate Change (UNFCCC), many governments and business leaders committed to carbon emissions reductions and set their targets, with the goal to become carbon neutral by 2050 and limit global warming to 1.5C compared to pre-industrial level. Decarbonization has become a priority for lots of companies, governments, and society at large, because of its importance in limiting global warming. While some progress has been made at the global, national, and local levels, recent scientific studies suggest that more needs to be done to stay on track to meet the Paris targets.

### 2.3 Why is decarbonization relevant for business?

To achieve decarbonization, it is paramount that we reduce the amount of CO<sub>2</sub> emitted across industries. This will require transitioning to clean energy systems. It is not surprising then that companies of different sizes all around the globe are increasingly looking for ways to reduce their carbon footprint.

Reducing carbon emissions and switching to renewable energy offers many benefits, from cost and risk reduction to improved competitiveness and new opportunities. Decarbonization can also help meet corporate sustainability and environmental, social and governance goals and address stakeholder demands.

### 2.4 Where should a company begin its decarbonization journey

The decarbonization journey is complex. Luckily, the right partner can help organizations of any size simplify the process and accomplish their goals. It is important to begin with data collection and monitoring to ensure that you understand your organization's carbon footprint and most significant sources of GHG

emissions. The next step is to set ambitious but realistic emissions reduction targets, grounded in climate science. Once targets are set, you should develop a strategic roadmap for your company's renewable energy initiatives and plan targeted actions to achieve your decarbonization goals. There is a variety of energy efficiency, decarbonization and renewable energy solutions available. Picking the right partner can help optimize a balanced and diversified renewable energy portfolio, combining the right solutions to meet organizational goals.

### 2.5 What is Net-Zero?

Net-zero refers to a balance between the amount of GHGs released into the atmosphere and the amount of GHGs removed. This means that in addition to reducing carbon emissions, entities can also rely on carbon offsetting. To meet the 1.5°C global warming target in the Paris Agreement, global carbon emissions should reach net-zero around mid-century. Among the 3,800 businesses and financial institutions, which are working with the Science Based Targets initiative (SBTi) to reduce their emissions, more than 1,400 have set Net-Zero commitments.

### 2.6 What is the difference between Zero Carbon and Net-Zero?

In contrast to net-zero, the term zero carbon stands for releasing no carbon dioxide into the atmosphere. In case of the energy sector, zero carbon energy is energy produced by a 100% renewable energy project like wind or solar.

### 2.7 What is the difference between Net-Zero and Carbon Neutrality?

Carbon neutral means that carbon emissions released into the are balanced by an equivalent amount absorbed from the atmosphere via carbon sinks such as forests. It is similar to the concept of net-zero. However, net-zero goes beyond carbon and is larger in [scale](#).

### 2.8 What is Climate Positive?

Climate Positive or Carbon Negative means going beyond carbon neutral and removing or capturing more GHGs from the atmosphere that you emit. This is now a company, for example, can have a negative amount of carbon emissions and have a positive climate impact.

## 3. Renewable Energy, PPA & VPPA

### 3.1 What is renewable energy?

Renewable energy comes from sources that are not depleted when used. These naturally replenished sources include wind, solar, geothermal, hydro (small), and others. While most of renewable energy sources are considered sustainable, some are not. For instance, dams associated with large hydro cause ecosystem degradation, while biomass is unsustainable at the current exploitation rates.

Increasing reliance on renewables to meet global energy needs has become a global imperative. A priority for governments, businesses, and society at large, renewable energy plays a key role in decarbonization as way to combat the climate change threat.

Thanks to the improving economics of renewable energy technologies, regulatory support, and decarbonization commitments driven by the climate change threat and stakeholder pressure, renewable energy demand continues to grow. According to Renewables 2022 Global Status Report published by REN21, renewables currently account for more than 13% of the total final energy consumption. Corporate purchases of renewable energy (PPAs) globally continue to grow with 31.1 GW of new renewable capacity added and 366 billion USD invested in renewables in 2021. However, there is plenty of room renewable power additions must ripple to be on track with major net-zero scenarios.

### 3.2 What is carbon-free energy (CFE)? And how does it differ from renewable energy?

Carbon-free energy is produced by resources that generate no carbon emissions. While these resources help reduce GHG emissions, they may have a negative environmental or economic impact. Take nuclear or large hydroelectric, for example, nuclear waste needs to be safely stored for a long time, which can be cost-prohibitive. Dams created when building large hydro have lasting detrimental effects on the surrounding ecosystems.

Renewable energy is considered a naturally replenishing resource that produces no emissions. Renewable energy sources include wind, solar, geothermal, biomass and small hydroelectric. Renewable energy projects developed by renewable energy companies focused on sustainability create additional environmental, social and economic benefits in addition to emissions reduction. These may include agriculture, education and training opportunities, job creation and infrastructure construction, among others.

While all renewable energy is carbon-free, not all carbon-free energy is renewable. Only naturally replenishing sources are considered renewable.

### 3.3 What is a Power Purchase Agreement?

A power purchase agreement (PPA) is a contracting tool used for long-term energy purchase agreements, between a buyer and seller (renewable energy project developer) of electricity. As discussed below, PPAs can be physical or virtual (financial). The renewable energy buyer contracts with a developer to purchase clean power and associated renewable energy credits. For a physical PPA, the renewable energy project should be installed on-site for the buyer (e.g., solar panels on a factory's roof) or in the same region/market, where the buyer's utility grid is located.

A PPA can be 'on-site' if the generation plant is installed on the site of the consumer's company, thus the plant is owned by the producer, who sells the electricity at the same location where the company consumes it. It may also be 'off-site' if the generation plant is not located at the company's site, because it may not have adequate space to have it, or because of logistical or environmental constraints. Therefore, the buyer buys clean energy from the producer, who supplies it to him through the public grid. In the case where the buyer takes title to the power (for either onsite or offsite), these are known as physical PPAs.

### 3.4 What is the difference between a Power Purchase Agreement and a Virtual Power Purchase Agreement?

A virtual power purchase agreement (VPPA) is a renewable energy contract that, unlike a physical PPA, does not involve the physical delivery of power from the seller to the buyer. It is a financial transaction, so the way the company powers its facilities or its relationship with its local utility does not change. The electricity generated by a renewable energy project is not owned by or delivered to the energy buyer, only the benefits of the renewable energy project (RECs) are.

While physical PPA has geographical constraints, such as the proximity to the renewable energy project, the company's load doesn't need to be near the renewable energy resource in case of a VPPA. Decoupling the load from the renewable energy resource like this makes VPPAs a sought-after renewable energy and decarbonization solution. Companies with facilities that are geographically dispersed can meet their energy needs with one single VPPA contract, delivering sustainability benefits to their customers, employees and investors and the planet, since helping to add a new renewable energy source to the grid. Also, abundance of renewable energy projects supported by VPPAs ensure competitive prices and availability for buyers

while flexible terms in these contracts create opportunities for companies large and small to buy renewable energy at scale. There are nuances of course. VPPAs are complex financial transactions that require attention to deal and a lot of effort to manage internal stakeholder expectations and financial risk.

### 3.5 What are the benefit of a PPA and VPPA?

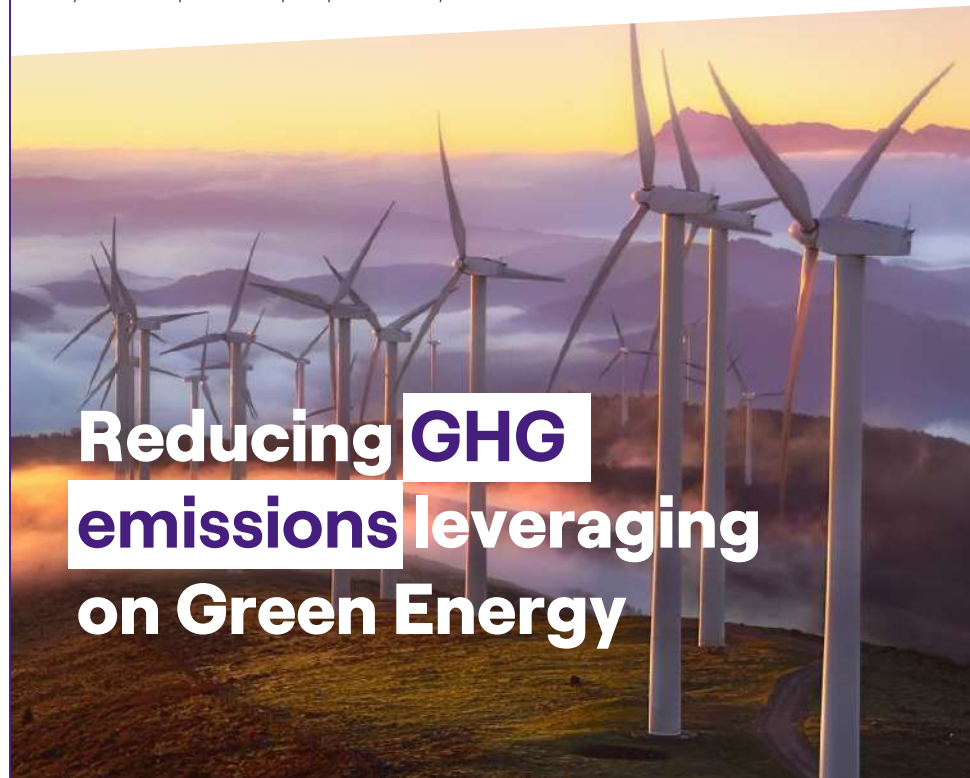
The use of PPAs has increased a lot especially for renewable energy projects. The growing demand for companies to switch to renewable energy requires significant structural and financial efforts. PPA's advantages include the promotion of the renewable energy market, a significant impact on the reduction of CO2 emissions and the guarantee of a constant energy price.

Indeed, one of the main features of a power purchase agreement is the agreement to sell a certain amount of MWh from a renewable energy project to an energy buyer at a fixed price. This helps to protect the buyer

from the volatility of energy market prices, guaranteeing secure revenues for the supplier.

Specifically, VPPAs can be used by companies to achieve their Scope 2 and 3 decarbonization goals, can help meet sustainability and ESG goals and address stakeholders' demands. Corporate renewables buyers with facilities that are geographically dispersed can meet their decarbonization needs by purchasing a single VPPA contract, since their loads don't need to be near the project.

Through VPPAs, companies can quickly and efficiently add large amounts of renewable energy to the grid. Buyers can benefit from project-specific sustainability marketing rights. Large developers like Enel's renewables business with projects all around the world can offer VPPAs in a variety of markets, ensuring that companies can make local grids cleaner in areas where they do business.



**Reducing GHG emissions leveraging on Green Energy**



# Managing Scope 1,2,3 emissions reducing your carbon footprint

## 4. GHG Emissions per Scope

### 4.1 What are greenhouse gases (GHGs) and which GHG emissions are most significant?

Greenhouse gases, or GHGs, are gases that trap heat or long-wave radiation in the atmosphere. The rising concentration of GHGs in the atmosphere has accelerated the greenhouse effect, blanketed our planet and altered its climate systems in countless ways.

The main gases responsible for the greenhouse effect are carbon dioxide, methane, nitrous oxide and water vapor, which occur naturally. Fluorinated gases, which also cause global warming are synthetic. How much GHGs impact global warming mainly depends on three key factors, including their concentration in the atmosphere, how long they remain in the atmosphere, and how effective they are in trapping heat.

Carbon dioxide (CO<sub>2</sub>) is the primary greenhouse gas emitted through human activities. It accounts for more than 70% of all GHG emissions and sticks around for quite a long time. Once it is emitted into the atmosphere, about 40 percent of it remains after 100 years, 20 percent after 1,000 year and so on. While CO<sub>2</sub> emissions come from many natural sources, human-related emissions are responsible for the increase that has occurred since the industrial revolution. The main human activity that emits CO<sub>2</sub> is the combustion of fossil fuels such as coal, oil, and natural gas to generate energy and for transportation, in addition to industrial processes and land-use changes. While methane (CH<sub>4</sub>) remains in the atmosphere for less time than carbon dioxide, its global warming impact is a lot greater than that of carbon dioxide. Globally, this gas accounts for about 17% of human generated GHG emissions.

### 4.2 Scope 1 GHG emissions and how to reduce them?

Scope 1 emissions are direct GHG emissions that occur from sources owned or controlled by an organization. Examples include, emissions associated with fuel combustion in boilers, furnaces, or vehicles. To reduce Scope 1 emissions, organizations can cut consumptions or invest in energy-efficient equipment. They can replace fossil fuels with cleaner, low-carbon alternatives.

### 4.3 Scope 2 GHG emissions and how to reduce them?

Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, heat or cooling or steam. To reduce Scope 2 emissions, organizations can switch to more sustainable suppliers of energy or source clean electricity. This can be accomplished in several ways, including signing power purchase agreements for renewables produced off-site,

generating clean electricity on-site, working with utilities and participating in green tariffs and well as purchasing renewable energy certificates (RECs).

### 4.4 What are Scope 3 GHG emissions?

Scope 3 emissions, as defined by the GHGP, are all indirect emissions (not included in scopes 1 and 2) that come from sources not owned or controlled by the reporting company. However, the organization has an indirect impact on these emissions through its value chain. Scope 3 emissions include emissions both upstream and downstream of the organization's activities. Examples include purchases of production-related products (e.g., materials, components, and parts) and non-production-related products (e.g., office furniture, office supplies and IT support) and transport and distribution. Downstream activities are processing of sold products, use of sold products, the end-of-life treatment of sold products, etc.

### 4.5 How to reduce scope 3 emissions?

Value chain emissions lie outside the direct operations of an organization and may therefore be more difficult to address, but they likely account for most of a company's greenhouse gas (GHG) emissions. The following three steps can help companies structure their value chain decarbonization:

- Collect data from existing suppliers and value chain partners and determine your current Scope 3 emissions;
- Set Scope 3 emissions reduction target. Science Based Targets initiative (SBTi) provides guidance and tools to support companies in setting targets in accordance with the latest climate science;
- Design an effective strategy to meet Scope 3 emissions reduction target. This can include a) collaboration initiatives with value chain partners: incentives and best practice sharing; and b) renewable energy and other procurement strategies;
- Measure and report on the reduction progress to validate the effectiveness of the existing strategy.

## 5. Carbon offsetting

### 5.1 What are carbon offsets?

A carbon offset is a type of greenhouse gas (GHG) emission avoidance, reduction or removal that is used to compensate or neutralize for corporate or individual carbon footprints through the purchase of carbon credits issued by accreditation standards to projects that remove GHG emissions from the atmosphere or avoid generating the emissions in the first place.

Carbon offsetting and removal are a crucial part of the transition to net-zero, through the financing of projects that absorb an equivalent amount of CO<sub>2</sub> or the purchase of credits. They are necessary to keep the global temperature increase below 1.5°C.

Carbon avoidance projects avoid or reduce emissions by preventing their release: avoiding deforestation, using renewable energy, and improving energy efficiency to reduce energy use and reduce corresponding CO<sub>2</sub> emissions.

Carbon removals are a specific type of offsetting, involving activities that remove, absorb carbon dioxide from the atmosphere: for example, planting trees (reforestation) to absorb carbon dioxide (CO<sub>2</sub>) from the atmosphere. These projects involve the use of natural and/or technological carbon removals, they are designed to extract CO<sub>2</sub> directly from the atmosphere.

This makes these activities more long-term effective, and this is the reason why international initiatives like SBTi (Science Based Target) promote only offsets from removals to counteract (i.e., “neutralize”) hard to abate emissions—up to 10% of total emissions and achieve 2050 net-zero targets.

### 5.2 Why would an organization choose to use carbon offsets?

Carbon offsets offer benefits for reducing greenhouse gas emissions, and voluntary carbon offset purchases also have the potential to provide another income stream for project developers by making greenhouse gas reduction projects more economically viable. Like online currency, although the offset purchase is not tangible, you have the right to exchange the ‘currency’ and count that offset against your reduction project’s emissions.

### 5.3 What is a carbon credit?

Carbon offset refers to a reduction in GHG emissions and is used to compensate for emissions that occur elsewhere. Carbon offset credits are transferrable.

A carbon credit is a permit that allows the owner to emit one ton of carbon dioxide or the equivalent in other greenhouse gases to help balance total global

emissions.

Purchasing a carbon credit means acquiring ownership of an equal amount of carbon offsets. A carbon credit is equal to one metric ton of CO<sub>2</sub>e removed from the atmosphere or prevented from entering the atmosphere by a specific project.

While carbon offsets refer to projects and activities that reduce carbon dioxide in the atmosphere, carbon credits in compliance markets represent a specific unit: one metric ton of carbon dioxide equivalent (CO<sub>2</sub>e), which is removed from the atmosphere or, more commonly, prevented from reaching it.

The existence of a unit of measurement has created a real market in which carbon credits can be transferred: one organization (e.g., a wind farm), can sell the unit to another organization (e.g., a software company), to offset the greenhouse gases emitted by the software company.

A photograph of a dense forest of tall evergreen trees, likely spruce or fir, shrouded in a thick mist or fog. The trees are dark green and stand against a lighter, hazy background. The overall atmosphere is serene and natural.

# Compensating & neutralizing the Carbon Footprint





# Staying updated on international finance and regulations

## 6. International Standards

### 6.1 What is the GHG Protocol?

The Greenhouse Gas Protocol (GHG Protocol) establishes global standardized frameworks for measuring and managing and reporting greenhouse gas (GHG) emissions from companies' operations and value chains. More than 92% of Fortune 500 companies reporting to the CDP use GHG Protocol.

### 6.2 What are ISO environmental management standards?

International Organization for Standardization (ISO) brings together experts for knowledge sharing and develop voluntary, mutually agreed upon and market relevant international standards that support innovation and provide solutions to global challenges. ISO describe the best way of doing a variety of things, from manufacturing products to process management. ISO 14000 is a family of environmental management standards that help reduce environmental impacts and waste and become more sustainable. Companies and organizations can use ISO these standards to manage their environmental performance. ISO 14064 standards define international best practices in the management, reporting and verification of data and information related to GHGs.

### 6.3 What are Green bonds?

Green Bonds are financial instruments which have experienced extraordinary growth since 2007.

These bonds make it possible to finance different types of projects with environmentally sustainable characteristics, such as energy efficiency, renewable energy development, sustainable land use, etc.

### 6.4 What are White Certificates and where are they used?

White certificates, also called Energy Efficiency Certificates (such as TEE in Italy), are part of the concept of economic support measures for energy efficiency and thermal energy production from renewable sources. They are negotiable securities certifying the achievement of savings in energy end-use through energy efficiency measures and projects. They are traded in Poland, France, and Italy.

### 6.5 What are Energy Attribute Certificate and where are they used?

Energy Attribute Certificates (EACs), also called electricity attribute certificates, are contractual instruments to convey information about the electricity

produced such as the type of plant, (e.g., hydro, wind, solar), the actual power plant where the renewable electricity was produced (e.g., plant name, location) and the actual amount of electricity produced (the unit is one megawatt hour MWh of renewable electricity).

Generally, EACs should convey all attributes with no attributes allowed to be separated from one another. There are four main types of EACs:

1. Guarantees of Origin (GO), Europe, issued by EECs;
2. Renewable Energy Guarantees of Origin (REGO), UK, issued by Ofgem;
3. Renewable Energy Certificates (RECs), North America, issued by various registries (such as NAR and PJM-GATS) and certified by states (for compliance markets) and organizations, such as Green-E for voluntary use;
4. International Renewable Energy Certificates (IREC), worldwide, issued by the International REC Standard.

Other national systems exist. For example, in Japan, Australia and Poland.

Each I-REC represents proof that 1 MWh of renewable energy has been produced and embodies the environmental benefits that the amount of renewable energy has generated. The purchase and cancellation of the EAC is done in such a way as to offset the energy consumed by the grid during a specific period, thus increasing the production of clean energy.

## 7. Carbon Disclosure Project (CDP)

### 7.1 What is CDP?

The CDP is an international non-profit organization that provides businesses, local authorities, governments, and investors with a global system of environmental measurement and reporting. CDP offers a system to measure, track, manage and disclose environmental information globally.

The main programs supported by CDP include Climate Change Program, Water Program, Forests Program and Supply Chain Program, plus a specific program dedicated to cities and regions.

In 2021, over 1,000 cities and more than 13,000 companies representing over 64% of global market capitalization disclosed through CDP.

### 7.2 CDP Climate Change Program and Supply Chain Program

A science-based The CDP climate change program involves a measurement and disclosure process that aims to improve corporate awareness of climate risks and of the most effective strategies for reducing carbon emissions. In 2021, 200 companies and 95 cities have made climate change A List.

The Supply Chain Program aims to help companies monitor and disclose the environmental data of their suppliers and involve them in emission reduction strategies. CDP acts as a conduit between the company and its suppliers to disclose their targets. To achieve major climate targets, it is necessary to understand and work with the supply chain. In 2021, suppliers disclosing through CDP reported emissions reductions of 1.8 billion tCO<sub>2</sub>e and savings of over US \$29 billion.

### 7.3 Why disclose with CDP?

The Companies derive value from responding to CDP. First of all, disclosing with CDP allows companies to track and monitor their progress towards their emissions reduction targets. It also allows companies to compare their results and progress with their industry peers. At the same time, disclosing with CDP means being able to obtain internationally recognized sustainability scores, which can help companies address their stakeholders' sustainability concerns. Indeed, more than 680 investors, with assets of over \$130 trillion, and over 200 large buyers asked companies to disclose their environmental data with CDP in 2022. This is also a way to manage reputational risk, since not responding to CDP may result in stakeholders wondering if the company has sustainability issues to hide. Another source of value is in that CDP questionnaires reflect changes in the sustainability reporting landscape and

best practices. So those companies that disclose with CDP are better prepared for ongoing changes in reporting requirements. CDP also works to align with other sustainability reporting frameworks and partners with different initiatives (e.g., SBTi and RE100) to drive sustainability progress. Such initiatives ensure that companies are pursuing the opportunities presented to them and are sticking to a long-term integrated sustainability strategy.

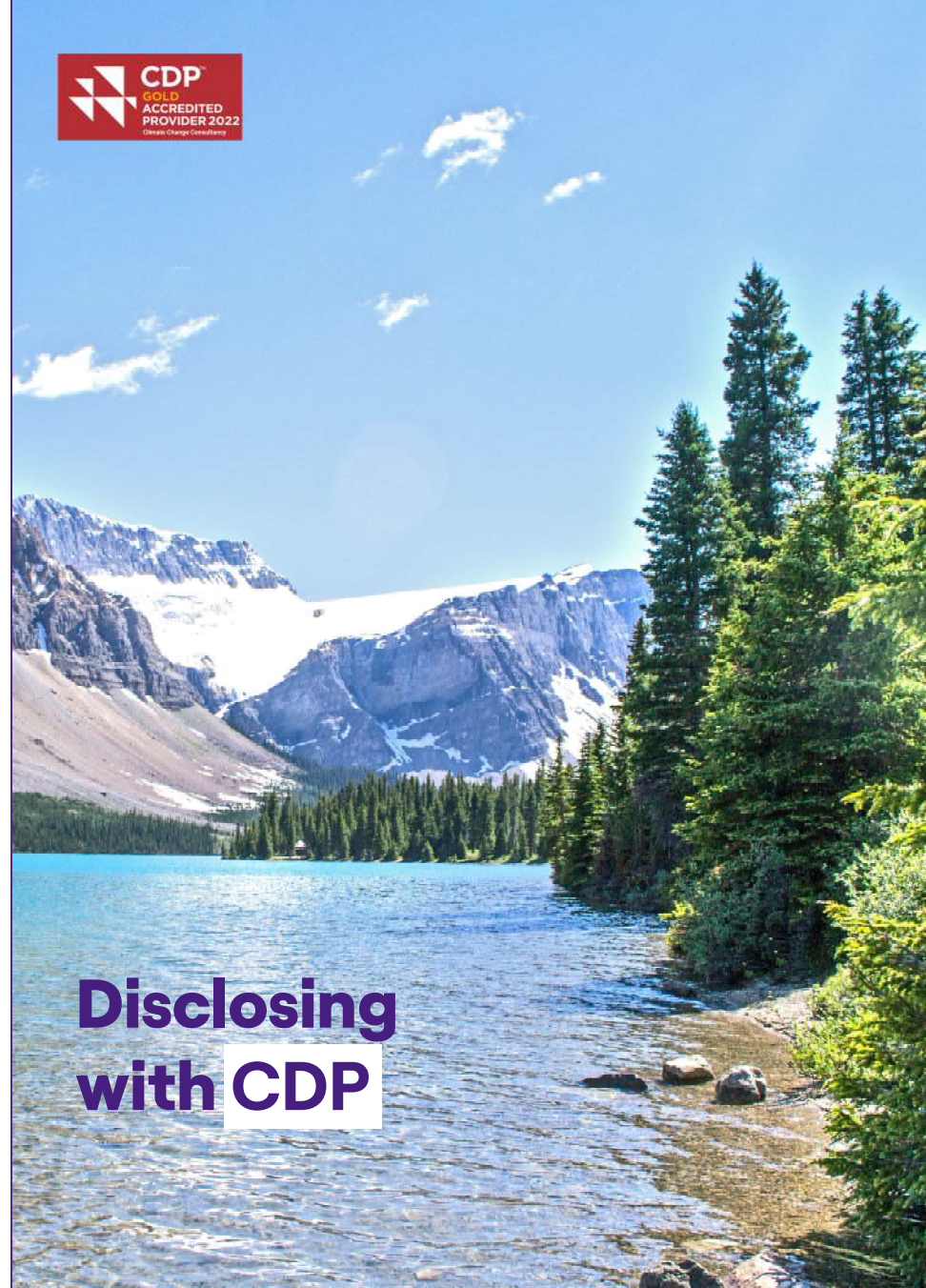
To disclose their environmental information, companies must fill out climate change, forest, and water security questionnaires through the CDP's Online Response System (ORS). Each company may be asked to answer all questionnaires or a combination of the three. Each registered company has a dashboard which reflects the reason why they were asked to respond to a questionnaire and stakeholders requesting the information.

### 7.4 What is the CDP score?

CDP scoring system that grades companies from A to F, with F indicating companies that were requested to respond, but failed to do so. Each grade corresponds to the company's level of progress, with the aim of improving towards leadership.

### 7.5 What is the role of a CDP Accredited Solutions Provider?

A CDP Accredited Solution Provider is a company that through its collaboration with CDP is able to offer its customers enhanced services and expertise to achieve their environmental targets. A good example is Enel X that is a CDP Gold Accredited Solutions Provider for Renewable Energy, helping companies plan custom-fit sustainable energy roadmaps that meet corporate sustainability goals.



**Disclosing  
with CDP**

## 8. The Science Based Target Initiative (SBTi)

### 8.1 What is the Science Based Targets Initiative?

The Science-Based Targets (SBTi) initiative is dedicated to increasing ambition in the fight against climate change and enables organizations to set science-based emissions reduction targets. These targets show companies how much and how quickly they need to reduce their emissions in line with the Paris Agreement goals. It is a partnership between CDP, the United Nations Global Compact (UNGC), World Resource Institute (WRI), and the World Wide Fund for Nature (WWF). The number of participating companies has been growing exponentially. Since the initiative was launched, more than 3,600 companies have committed to or set science-based targets and 1300 have set net-zero commitments.



### 8.2 What are "science-based" targets?

Targets are considered science-based if they are in line with the latest climate science findings on what GHG reductions are necessary to meet the goals of the Paris Agreement, limiting global warming to 1.5 °C above pre-industrial levels.

A company that demonstrates its intention to set a science-based target is considered "committed". Once the objectives are well defined, they are validated by the SBTi and officially become "targets." Science-based targets can be absolute or intensity. Absolute targets aim to reduce an organization's total GHG emissions by a specific amount. For instance, Company X aims to reduce its emissions by 25% by 2030. Intensity target is a normalized metric that sets emission reduction targets relative to some sort of economic output (such as number of employees or revenue, etc.). This allows businesses to set emissions reductions targets while also continuing economic growth.

## 9. Task Force on Climate-Related Financial Disclosures (TCFD)

### 9.1 What is it and what are the main objectives of the task force?

The Task Force on Climate-related Financial Disclosures (TCFD) was established in 2015 by the Financial Stability Board (FSB), the body that promotes and monitors the stability of the global financial system, with a goal of supporting efficient capital allocation in a transition to a low-carbon economy. The TCFD has developed voluntary recommendations on climate-related information that companies should disclose in their mainstream financial filings. The recommendations are designed for the market so that investors, lenders and others make

sound financial decisions in a rapidly changing world. By adopting TCFD recommendations companies in every industry are integrating climate risk into their reporting and disclosure process and providing better disclosure, more transparency.

disclosure process and providing better disclosure, more transparency.

The Task Force recommendations built on the existing disclosures practices, avoiding additional reporting burden on companies. They allow businesses to begin thinking climate-related future costs and how they can be avoided or mitigated.



## 10. The RE100 Initiative

### 10.1 What is it and what are the main objectives of the initiative?

RE100 is the corporate renewable energy initiative bringing together influential companies committed to 100% renewable electricity and working to accelerate clean energy transition globally through collective action. RE100 shares the compelling business case for renewable energy and showcases corporate actions,

working with others to address barriers and develop transparent reporting mechanisms.

Led by the Climate Group and in partnership with CDP, RE100 currently has more than 370 members in a variety of industries and more than 175 markets around the world, encouraged to report their electricity and renewable electricity use annually.

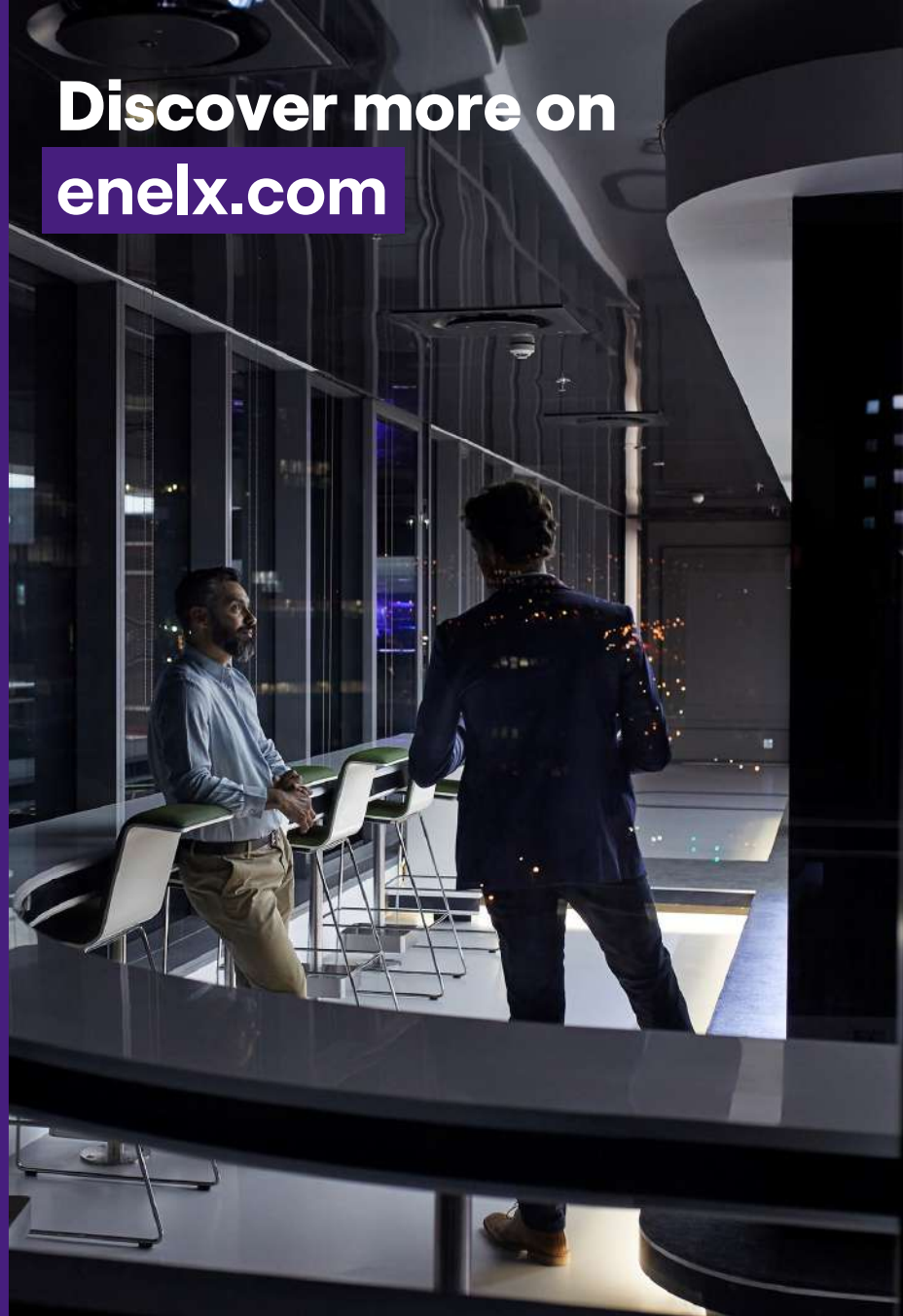


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