



Decarbonizing Supply Chains: Collaboration and Renewable Energy Strategies

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With organizations increasingly focusing on becoming more sustainable, decarbonization of the corporate value chain is rapidly becoming a priority. However, understanding Scope 3 greenhouse gas (GHG) emissions and developing a reduction strategy is not an easy journey. As a result, many companies are uncertain where to begin. This guide seeks to answer questions organizations may have. It focuses on supply chain emissions and discusses:

- What emissions are included in Scope 3 and why they are important
- The main steps to tackling supply chain emissions, from data collection to implementation
- Collaboration with suppliers and procurement strategies, including renewable energy

Businesses are feeling the need to become more resilient and sustainable post-pandemic

As the coronavirus pandemic eases its grip on economies and societies around the globe, businesses are rethinking their operations, looking for ways to become more resilient. COVID-19 has put considerable stress on most companies' supply chains, underscoring many weaknesses, from sourcing raw materials to the distribution of finished products. With [94% of Fortune 1000 companies](#) experiencing supply chain disruptions as a result of the pandemic, it has become clear that company supply chains need to change to prepare for the next wave of disruptions associated with climate change.

At the same time, a recent [Boston Consulting Group study](#) shows that the pandemic has heightened sustainability awareness, resulting in increased scrutiny of company operations. Customers, investors, industry peers, and other stakeholders are increasingly demanding transparency from companies on environmental, social, and governance (ESG) issues. The CFA Institute, a global association of investment professionals, reported that more than [85% of its members consider ESG](#) in their decision-making. As a result, more companies are committing to climate action than ever before and are setting ambitious emissions reduction targets, including those in their supply chains.

Companies are increasingly setting science-based decarbonization targets

Methodology for setting corporate emissions reduction targets has been evolving to include extensive data collection, analysis, and external validation. Today, businesses are increasingly working with the [Science-Based Targets initiative](#) (SBTi) to reduce their emissions in line with climate science. More than 1,800 companies have committed to or set science-based targets through SBTi, and this number has been more than doubling annually for the past five years.

3 steps to help companies decarbonize their supply chains:

1. Collect data from existing suppliers and determine current supply chain GHG emissions.
2. Set supply chain emissions targets and design a strategy to meet them.
3. Implement a supply chain emissions reduction strategy via: a) collaborative initiatives and b) renewable energy and other procurement strategies.



The race toward net zero is picking up

Leading corporations around the globe are setting net-zero targets. About 46% of the world's largest businesses in the highest-emitting sectors had set a net-zero target as of 2021, according to [BloombergNEF's Corporate Net-Zero Assessment Tool](#) (login required). The term "net zero" generally refers to a balance between greenhouse gases emitted into the atmosphere and those taken out. Yet many companies define their targets differently, using terms like "carbon neutral," "zero carbon," and "climate positive" interchangeably with "net zero," and choose different paths toward the same or similar goals. Regardless, the strength of organizational targets largely depends on addressing emissions across the entire value chain. Accordingly, companies are increasingly joining initiatives like [1.5°C Supply Chain Leaders](#) to focus on working with their suppliers to achieve net zero before 2050 and [RE100](#) to accelerate the transition toward decarbonized grids.

Companies are focusing on Scope 3 emissions: why is this important?

Companies pursuing science-based targets generally have a [clear understanding](#) of Scope 1 emissions generated by their own operations and Scope 2 emissions originating from energy they purchase. Yet according to the Carbon Disclosure Project (CDP), company supply chain emissions are on average [11.4 times](#) greater than operational emissions. As a result, to achieve climate targets, organizations are increasingly pledging to reduce Scope 3 emissions from sources that are not owned or directly controlled by them but which indirectly impact their value chain. About [90%](#) of companies that submitted their targets to the SBTi in 2021 included Scope 3 in their decarbonization commitments. From raw materials to customer use of products and their end of life, Scope 3 emissions often account for the lion's share of a company's overall emissions. By addressing Scope 3 emissions, businesses can significantly decrease their carbon footprint and amplify their climate impact.

Comparing Scope 1, Scope 2 and Scope 3 GHG emissions:*

- Scope 1 GHG emissions directly come from sources owned or controlled by a company (e.g. fuel combustion in boilers, furnaces, vehicles).
- Scope 2 are indirect GHG emissions associated with electricity, heat, steam, and cooling purchased and consumed by an organization.
- Scope 3 emissions come from sources not owned or controlled by the organization, but 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.

*Learn more at [Greenhouse Gas Protocol](#)

Three steps to tackling supply chain emissions

The challenge with Scope 3 is that most supply chain emissions lie outside a company's direct ownership, measurement, or control. Therefore, reduction efforts require a greater degree of analysis, as well as collaboration with suppliers and industry groups. The following three steps can help companies structure supply chain decarbonization:

1. [Collect data from existing suppliers and determine current supply chain GHG emissions.](#)
2. [Set supply chain emissions targets and design a strategy to meet them.](#)
3. [Implement a supply chain emissions reduction strategy via: a\) collaborative initiatives and b\) renewable energy and other procurement strategies.](#)



Collect data from existing suppliers and determine current supply chain GHG emissions

Data collection and consolidation for Scope 1 and Scope 2 emissions involves internal action. Scope 3 data collection requires a more intensive effort, mainly because of the reliance on external organizations. Establishing a supply chain emissions baseline is critical and generally requires a deeper understanding of carbon accounting and more rigorous engagement with suppliers. To begin, it is important to understand existing data collection and reporting processes to identify gaps and areas for improvement. There are [several methods](#) for calculating emissions that require different types of data. Companies have to determine the appropriate calculation methods based on their goals, as well as availability and quality of data. It is important to use more granular data for tier 1 suppliers and for products, components, or raw materials that contribute the most emissions. It is advisable to use a system to manage and automate the data collection process and consult existing publicly available resources, including GHG Protocol, EPA, and [SBTi](#), as well as industry best practices. Understanding current supply chain GHG emissions helps companies discover opportunities for impact and ensure that decarbonization measures are effective.



Scope 3 categories defined by the GHG Protocol

Cat. #	Description
1	Purchased goods and services
2	Capital goods (e.g. buildings, machinery, equipment)
3	Fuel- and energy-related activities
4	Upstream transportation and distribution
5	Waste generated in operations
6	Business travel
7	Employee commuting
8	Upstream leased assets
9	Downstream transportation and distribution
10	Processing of sold products
11	Use of sold products
12	End-of-life treatment of sold products
13	Downstream leased assets
14	Franchises
15	Investments

Set decarbonization targets and design a strategy to meet them

The next step is defining the right Scope 3 decarbonization target, designing a strategy to meet it, and publicly reporting on progress. More than 15 emission categories outlined by the GHG Protocol should be assessed, from purchased goods and services, capital goods, and transportation to the use and end of life of products. Companies should first focus on the material impact areas for the supply chain, then set emissions reduction targets. The Scope 3 target should be at minimum in line with the percentage reduction of absolute GHG emissions required at the global level over the target timeframe. Another approach is sector-specific, where the sectors and Scope 3 categories align. Targets should demonstrate the company's ambitions in terms of absolute tons of GHGs being reduced, as well as GHG intensity improvements. Driving emission reduction through the supply chain involves engagement targets. Companies can commit to influencing some suppliers to set decarbonization targets.

Implement a supply chain emissions reduction strategy

The operational changes needed to reduce Scope 1 and Scope 2 emissions, including waste and packaging reductions or shifts to renewable energy, are within a company's control. However, supply chain emissions can be tackled only by working together with suppliers and best practice-sharing initiatives. Procurement strategies and policies can also be used to address Scope 3 emissions. Companies can define supplier requirements and encourage and incentivize suppliers to procure renewable energy.

Collaborative initiatives

Collaboration to reduce Scope 3 emissions requires generating external momentum. Launching collaborative initiatives can foster engagement and knowledge sharing. Companies should identify and engage with key suppliers. Through such initiatives, they can learn together and help one another set targets, exchange emissions reduction and sustainability best practices, monitor progress, and create incentives for action. The goal is to encourage suppliers to monitor and report GHG emissions, as well as set emission reduction targets. In addition, collaborations can demonstrate a company's sustainability leadership and highlight advantages to suppliers and the industry.

Enel Green Power is an example of its own

In 2020 the company set its science-based target, which includes a commitment to reduce its absolute Scope 3 GHG emissions for the use of sold products by 16% by 2030. While working on setting its supply chain target, Enel began incentivizing its suppliers to become more sustainable. The renewable energy supermajor introduced global sustainability criteria to access and select its suppliers. Enel's [K Factor](#) criteria includes the use of renewable energy in business operations, sustainable supply chain certification, and application of circularity principles (e.g. recycled materials use).

Renewable energy and other procurement strategies

Another way to implement supply chain emissions reduction is through procurement. Companies can shift toward low-carbon alternatives or continue to purchase the same products while picking suppliers with a lower carbon footprint. They can introduce sustainability into their supplier selection criteria and procurement standards. One high-impact strategy is to encourage suppliers to transition to renewable energy. In addition to offering them financing to install renewable power technologies on-site, companies can facilitate supplier access to renewables. Solutions offered by renewable energy companies like Enel Green Power are flexible and allow several companies to collaborate to purchase clean power at scale through renewable energy [aggregations](#). Aggregating demand helps companies with smaller electricity loads by enabling them to take advantage of a procurement vehicle that may not have otherwise been available. Large companies can serve as anchors for such aggregations. They can share their renewable energy procurement experience and even financial standing with their suppliers by partnering with them on an aggregation. Renewable energy procurement is a powerful decarbonization tool, because clean power targets and claims are easy to understand, track, and communicate.



Industry examples abound

Industry leaders have begun demanding more stringent sustainability standards and action from their suppliers and introducing collaborative sustainability initiatives targeting their supply chains, including renewable energy procurement programs. For example, Anheuser-Busch – a leader in the US beverage industry – launched [Eclipse](#), a sustainability-focused collaboration platform for its network of suppliers and partners. The platform facilitates shared goals and target-setting, standardized measurement, and exchange of best practices. Anheuser-Busch achieved its sustainability goal [to source 100% of its purchased electricity from renewables by 2025](#) early and is sharing solutions with its partners globally to drive meaningful change.

Other large food and beverage companies are also working with suppliers to tackle Scope 3 emissions. Starbucks is focusing on achieving [carbon-neutral green coffee by 2030](#) by helping farmers face challenges associated with climate change. One of the company's strategies is equipping farmers with precision agronomy tools that allow them to cut carbon emissions on their farms. Global food company Danone is working with more than [58,000 farms](#), supporting them in transitioning to regenerative agriculture.

Tech companies like Microsoft and Apple have been vocal about targeting emissions in their supply chain. Many have been working with their suppliers to reduce [Scope 3 emissions](#). Microsoft promised to make carbon reduction an [explicit aspect](#) of its procurement process and is partnering with the International Finance Corporation (IFC) to reduce its supply chain emissions by [50 percent](#) by 2030. IFC, the largest global development institution focused on the private sector, is helping Microsoft's emerging markets manufacturers identify technical solutions and financing opportunities that can reduce GHG emissions in production processes.

Apple plans to transition its entire manufacturing supply chain to renewables. Its [Supplier Clean Energy Program](#) has secured commitments from over 109 suppliers to use 100% renewable energy for Apple production. The company trains suppliers on renewable electricity sourcing options available to them in their countries. In China, where businesses have limited options to access renewables, Apple created the China Clean Energy Fund, which enables it to invest in clean energy projects with its suppliers.

Apple also connects suppliers with opportunities to buy renewable energy directly from project developers and utilities.

To reduce their supply chain's carbon footprints, automakers have joined together under the [Drive Sustainably](#) initiative, aligning vetting criteria for automotive parts manufacturers. The [BMW Group](#) powers its production facilities worldwide entirely with green electricity. It has now pledged [to use battery cells produced using renewables](#) in its electric cars, compelling its suppliers to move toward clean electricity. Volkswagen introduced a [sustainability rating for its suppliers](#) in 2019, making it clear that reductions in supplier emissions will play a role in the awarding of contracts. Mercedes followed suit in 2021 and came out with [supplier ambition ratings](#) to assess the sustainability performance of its direct suppliers. General Motors' commitment to becoming [carbon neutral by 2040](#) includes transitioning to electric vehicles and tackling supply chain emissions. Through its new [partnership](#), the company is offering suppliers in Texas an opportunity to buy renewable energy at a discount.

In the retail sector, Walmart's [Project Gigaton](#) aims to reduce 1 gigaton of GHG emissions from Walmart's supply chain by 2030. The project, launched in 2017, is a partnership between Walmart and its suppliers. The retailer built a platform, making it easy for suppliers to develop emission-cutting goals and track their progress. The company hosts events for suppliers to share best practices and provide resources like calculators to help set and report on goals. Through its Project Gigaton initiative, Walmart is helping suppliers transition to renewable energy. It seeks to educate suppliers on their renewable energy options and [aggregate like-minded, co-located suppliers to combine purchasing power](#).

Home furnishings retailer IKEA launched a [program](#) to support its suppliers on their journey toward 100% renewable energy. With a goal to become [net zero by 2050](#) at the latest, the company offers affordable aggregated Power Purchase Agreements (PPA) to its suppliers, particularly where access to clean power markets may be difficult for individual suppliers. IKEA also finances suppliers' investments in clean power installations at their on-site locations.



Conclusion

Decarbonization of supply chains is becoming an integral part of many companies' sustainability and ESG strategies and goals, as they strive to align themselves with competitors and respond to stakeholder demands. While addressing supplier emissions is not an easy undertaking, companies can take concrete steps and consult guidance for best practices to help move toward their goals. The process involves collecting data, setting targets, designing an emissions reduction strategy, and implementing it. The current market provides a vital opportunity to engage with suppliers, explore collaboration, share knowledge, and support them in transitioning to renewable energy.

Learn more about Scope 3 GHG emissions reduction:

- GHG Protocol's [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#)
- EPA [Scope 3 Inventory Guidance](#)
- SBTi [website](#) and its [Best Practices in Scope 3 GHG Management](#) guide
- CDP [Supply Chain](#) global disclosure system
- ISO's [environmental standards](#), including 14064, focused on GHG emissions

What's next?

To discuss how to address supply chain emissions or renewable energy aggregations for your organization and/or suppliers, reach out to commercialegp@enel.com and keep an eye out for our forthcoming Renewable Energy Aggregations Guide. Our white paper, [Is the VPPA the Best Path for Achieving Your Sustainability Goals?](#), is a great place to learn more about Enel's solutions. Learn more about our [work with local communities](#) and our [renewable project portfolio](#).

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