



**CLEAResult<sup>®</sup>**

**Decarbonization guide**  
for small and medium-sized businesses

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## Executive Summary

Corporate stakeholders are demanding greater environmental accountability as impacts from climate change intensify. While most large companies have set carbon reduction goals, many small and medium-sized businesses (SMBs) have not yet started their decarbonization journey. SMBs in the commercial and industrial space must act quickly to become more sustainable and hedge against competitive pressure and rising fuel costs.

There is good news for those getting started. Funding from the recently passed Inflation Reduction Act (IRA) and other environmental legislation, tax incentives and energy-focused expertise will significantly increase the amount of decarbonization resources and opportunities available for businesses.

Beginning a carbon reduction journey does not have to be complicated. A business's first step is to use easily accessible data to establish a baseline, by measuring its carbon footprint. The company then needs to set goals and create a roadmap based on the available budget and resources. While effectively tracking and reducing greenhouse gas (GHG) emissions over time requires a sustained, committed effort, businesses can enact straight-forward energy efficiency measures to achieve short-term gains. As most SMBs need their in-house team to focus on core competencies, investing in outside carbon expertise may be the best course of action to expedite processes, maximize available funding, and ensure accurate and sustained reporting.



## Introduction

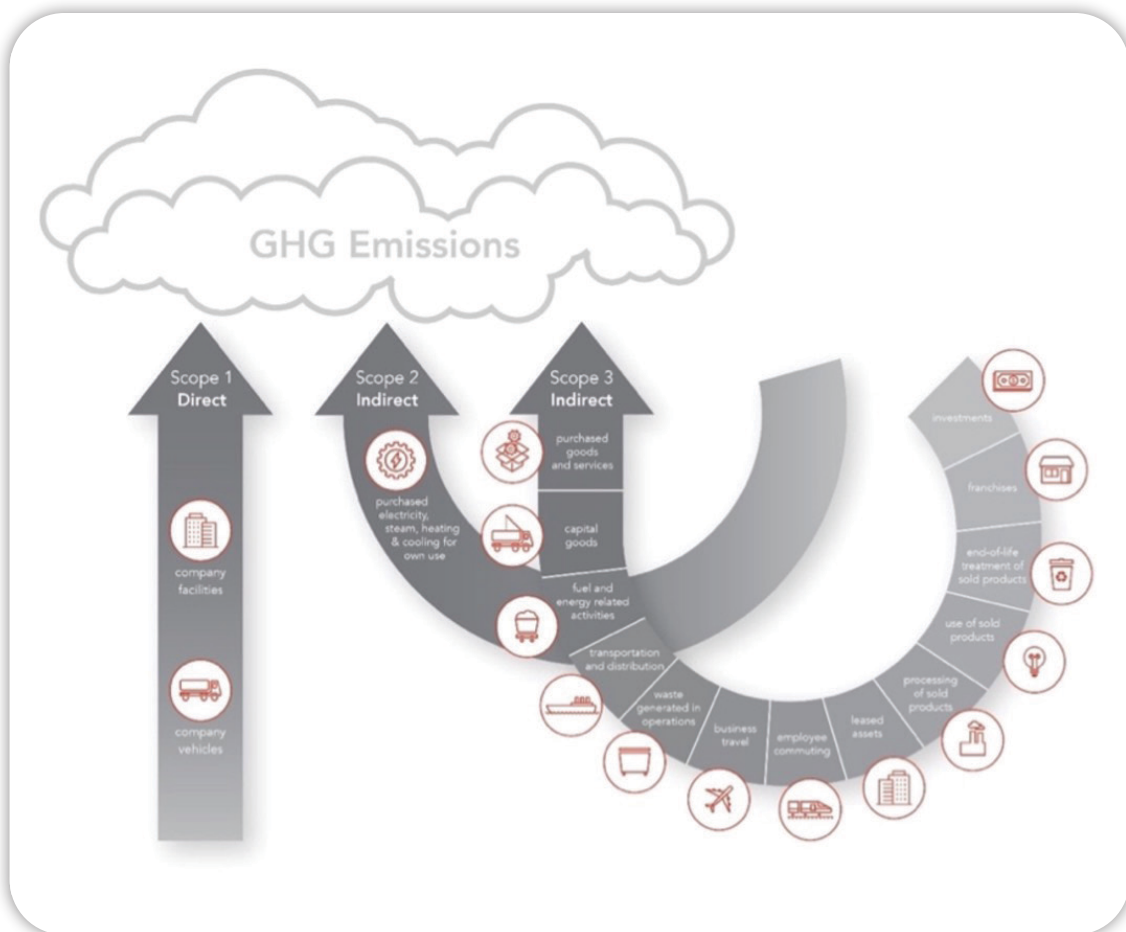
The growing global focus on climate change is prompting businesses to take responsibility for their environmental impact. SMBs are not exempt from climate consciousness and must act quickly to attain and retain investors and clients. While SMBs vary greatly in their business dealings, they do share some commonalities that are directly related to their carbon footprint: the need to attract investors, top talent, business partners and customers. Many SMBs are involved in the supply chain and will feel the most acute pinch as large companies examine their vendors for more sustainable practices.

In this guide, we'll consider actions SMBs must take to remain competitive in a carbon-aware market, including measuring their footprint, planning and implementing carbon reduction strategies, and monitoring/reporting results.

## Sources of GHG emissions

Before discussing how to manage carbon reduction, let's take a look at where a business's GHG emissions originate. They fall into three Scopes:

- ✓ Scope 1 – Direct emissions from facilities and vehicles owned or controlled by a company, such as natural gas used to produce goods and fuel for company vehicles
- ✓ Scope 2 – Indirect emissions resulting from the production of electricity, steam and heat purchased from a utility or energy services company
- ✓ Scope 3 – All other indirect emissions associated with a company's activities, including business travel, purchased goods and how products are used by customers



Companies often focus on Scopes 1 and 2 to begin with, as these are easier to track and manage. Scope 3 emissions cover a broad range and come from outside direct control of the organization where tracking may not be as rigorous. While more difficult to identify, measure and control, Scope 3 represents many companies' largest source of GHG emissions and should not be dismissed. SMBs must also consider how they contribute to their clients' and partners' Scope 3 emissions.





## Climate responsibility is a business imperative

**Decarbonization is not only critical in mitigating climate change, but an essential factor in a company's success.**

As businesses assume more environmental responsibility, climate consciousness is pushing its way to the top of CEOs' agendas. While SMBs are not subject to the same level of public scrutiny as large commercial and industrial companies, they share the need to attract employees, investors and customers. These stakeholders are taking carbon footprint and sustainability policies into consideration when making business decisions. Gen Z is particularly relevant to many companies as they represent a business's current and future client base and workforce, and their views are a key indicator of market trajectory.

- ✔ Over 55% of consumers across generations said a company's sustainability influences their buying decisions and would pay more for sustainable goods ([2020 First Insight report](#))
- ✔ 76% of Gen Z participants said that climate change is one of their biggest social concerns, influencing career choices ([2021 Pew Research Center report](#))
- ✔ 88% of investors put environmental, social, and governance (ESG) on par with other top considerations when making business decisions ([Edelman Trust Barometer, 2021](#))

Reducing GHG emissions is especially critical for SMBs that make up the supply chain, as clients demand greater carbon accountability from vendors that contribute to their Scope 3 emissions. According to the U.S. [Environmental Protection Agency](#), supply chains often account for more than 90% of a company's GHG emissions.

We've outlined some practical steps and advice SMBs can use to decarbonize.

"We found a positive relationship between ESG and financial performance for 58% of the 'corporate' studies focused on operational metrics such as ROE, ROA, or stock price.

**NYU Meta-Study**  
([ESG and Financial Performance](#))



# Getting started

## Assemble your team

Give careful consideration when choosing the project lead, as this person will need the drive and clout to socialize decarbonization throughout the organization and ensure execution of the roadmap. Since staffing is tight at most SMBs, it is also important to determine how many, and which people should comprise the internal team under the project lead. Ongoing management support is critical to ensure the decarbonization leader and team have the bandwidth and resources to manage the process over time.

## Consider outside expertise

The majority of SMBs will benefit by hiring a company with carbon consulting and engineering experience so their internal teams can continue to operate on mission-critical initiatives. Projects will likely require electrical, mechanical, energy management and project implementation expertise.

Specialized vendors can quickly spot opportunities during their assessment and prioritize those easiest to implement, accelerating the decarbonization process and shortening payback periods. These partners can also help navigate the myriad of incentives and resources available through government and utility programs, lowering upfront implementation costs.

Most carbon consultants will work with clients to determine the ideal assignment of internal and external roles, based the company's size, resources and related in-house expertise.

## Carbon accounting

Whether your company will be working with outside experts or beginning the process in-house, it is important to understand the basics of carbon accounting. The information you collect will be used to establish a baseline to measure your progress and prioritize projects. While you can increase the sources you measure over time, it is important that the measurements are being captured accurately. SMBs may want or need to use carbon accounting for external reporting to clients or investors. The basic steps to begin collecting data are listed in the section below.

SMBs can initially use existing software, even a simple spreadsheet, to begin logging their GHG emissions data. As data streams are added to improve accuracy, forward-thinking companies will switch to specialized [carbon accounting software](#) to simplify and standardize reporting. A carbon consultant can help you choose and set up the best system for your needs.



# How to measure your carbon footprint

If SMBs only take one action towards decarbonization, it should be to measure their current GHG emissions. Before undertaking the carbon reduction process in-house or through outside advisement, it is important to establish a baseline. Understanding the sources of carbon emissions allows companies to identify opportunities, cut operational costs and improve sustainability. Begin by collecting data from energy purchases the past year to measure Scope 1 and 2 emissions, as described below.

## Scope 1 Emissions

- ① Find the quantities of all combustible fuel—including natural gas, propane, gasoline and diesel—directly purchased for your facilities and company-owned vehicles during the past year
- ② Use an [online calculator](#) (such as this one provided by the U.S. EPA) to convert these quantities into their CO<sub>2</sub> equivalents
- ③ Record the GHG emissions data for each fuel type and total them

As you progress, you can improve the accuracy of your Scope 1 emission estimates by adding industrial gas purchases (if applicable) and fugitive emissions, such as leaks from refrigeration systems, AC units and fire suppression systems. Reference the [U.S. EPA Guide](#) for additional information about fugitive emissions.

## Scope 2 Emissions

- ① Refer to utility bills to find the quantity of electricity (plus steam and heat if applicable) purchased during the past year at each facility
- ② Link to the U.S. EPA's [Data Explorer eGrid](#) and set the "level" pulldown menu to "state"
- ③ Use the chart to determine the conversion multiplier for each facility's location
- ④ To convert these quantities into their CO<sub>2</sub> equivalents, multiply the annual energy purchased for each facility by the corresponding state multiplier\*
- ⑤ Add the carbon emissions data from all facilities to determine your total Scope 2 emissions

\*Note the eGrid chart lists CO<sub>2</sub> emission rates in megawatt hours (MWh). Be sure to check the utility data units you are using and convert as needed before logging and reporting results.

Additional information in the [GHG Protocol Scope 2 Guidance](#) can help you improve the accuracy of your estimates.

## Scope 3 Emissions

SMBs should consider adding Scope 3 data streams as they become more familiar with the carbon reduction process. The accuracy of your footprint will be improved by adding Scope 3 and other GHG emissions, but this can be done in phases to make measurement more manageable. The GHG Protocol allows an organization's initial baseline to be refined while data streams are added to improve accuracy. The [Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#) and [Technical Guidance for Calculating Scope 3 Emissions](#) are useful resources to help companies better understand Scope 3 emissions.

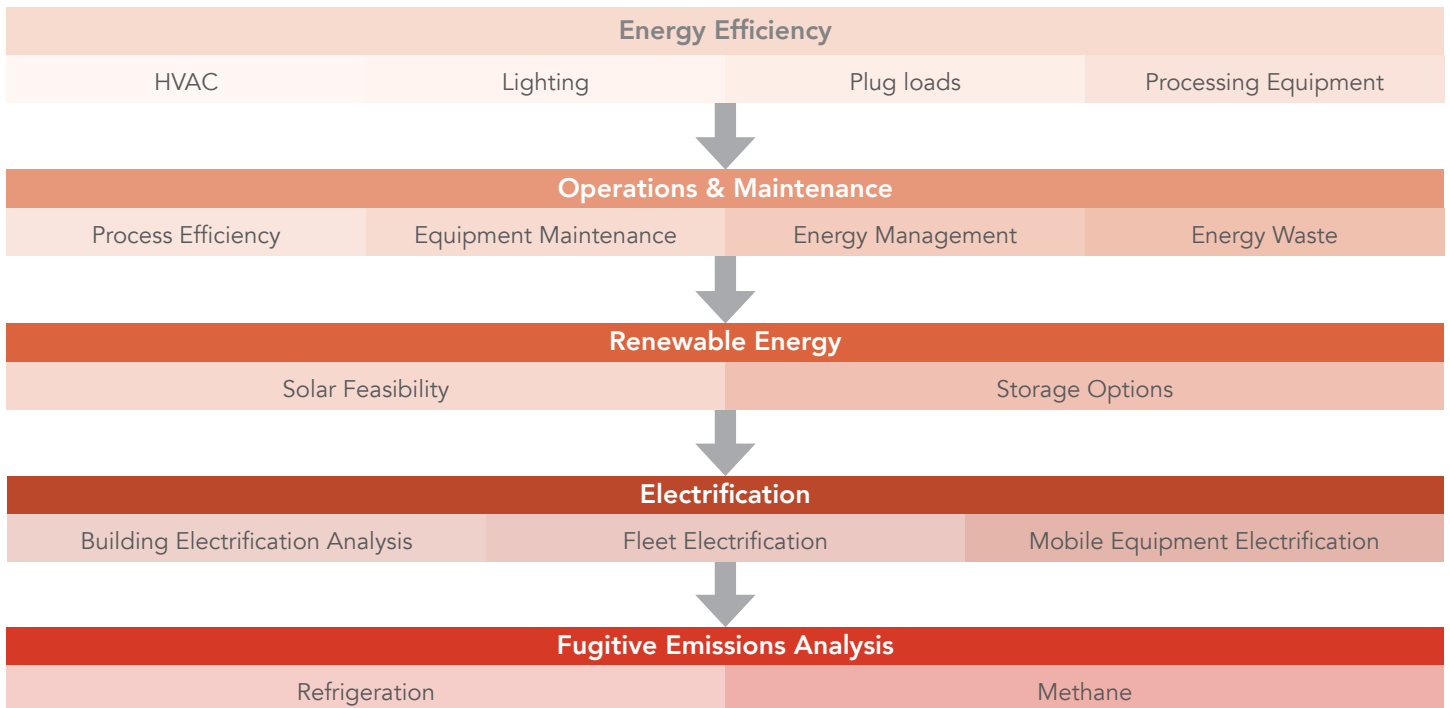


# Planning

## Identify opportunities

Decarbonization projects should be grouped and prioritized as shown below, ideally with the help of carbon engineers trained to optimize energy efficiency. Elements to consider are listed under each category.

Thirty percent of energy efficiency improvements identified during assessments require zero capital and should be addressed first.



## Create a plan

Structure the information you have accumulated, adding details and timing:

- 1 Define the roles of internal and external team members
- 2 Set a carbon reduction goal and budget for Year One
- 3 Prioritize Year One projects, starting with quick turnaround projects using existing resources
- 4 Divide these projects into phases, detailing timing, activities, dependencies and contingencies in each phase
- 5 Develop a reporting structure for emissions data
- 6 Outline activities beyond Year One, along with projected costs





# Implementation

## Quick tips for immediate reductions

Initially focus on registering quick wins, then measure their impact to gain momentum within the organization. Here are some highlights from our recently published [article](#) on easy ways to start reducing:

- ✔ Automate when possible – Install smart thermostats, control systems and power strips when possible, and ensure computers are up to date on their power management settings
- ✔ Replace old equipment – Upgrade to newer, more efficient equipment and purchase ENERGY STAR® qualified models when available
- ✔ Check that thermostat schedules are up to date – Periodically review settings to ensure they reflect your current work schedules and optimize HVAC turn down time
- ✔ Train staff to turn off equipment when not in use – Teach workers to fully turn off equipment that otherwise defaults to standby mode

## Prioritizing projects

Energy efficiency measures can usually be implemented quickly and are often the least expensive and most effective ways to reduce Scope 1 and 2 emissions. In fact, according to a [2019 study by the American Council for an Energy-Efficient Economy \(ACEEE\)](#), energy efficiency alone can cut U.S. GHG emissions and energy use in half by 2050. Examples of energy efficiency measures include replacing old equipment and lighting, programming thermostats and training staff to save energy. Properly maintaining equipment and analyzing how and when to best use it will further reduce energy waste.

Next companies should consider renewable energy options such as on-site solar installation, which can significantly reduce GHG emissions. Adding battery backup allows businesses to store energy during peak sun hours and use it when the sun goes down. If on-site generation is not an option, companies may be able to upgrade to a renewable power mix offered by their utility or energy service provider.

Replacing gas-powered equipment with electric models can further reduce GHG emissions, if a high ratio of clean energy is used to power the grid where a facility is located (see [eGrid CO<sub>2</sub> emissions by state chart](#)). Companies with transport vehicles should consider transitioning to electric models to lower GHG emissions and reduce fuel-related costs of ownership, regardless of location. Purchasing carbon offsets can compensate for any remaining GHG emissions, enabling companies to reach their decarbonization targets.



## Overcoming Obstacles

**Urgency:** Many companies underestimate the time and effort needed to decarbonize, which can lead to “corporate fatigue”—even early on in the measurement process. This can delay strategic planning or put implementation projects on indefinite hold. Building momentum is essential during the early phases of the process.

**Funding:** Capital constraints are often cited by SMBs as a reason to postpone carbon reduction projects. Even when funding is not an issue, however, perception problems persist. A [U.K. carbon study](#) found that the value of capital has no effect on implementation rates. In fact, even when no capital investment is required, analysis shows these rates remain low at twenty percent. SMBs should focus on the outcome of their actions and consider which funding options, such as those listed in the next section, will get them there.

**Commitment:** Internal training and motivation are necessary to keep progress on track, so it may be helpful to enroll employees across disciplines to help promote effective behavior modification. Be sure your plan includes ways to maintain organizational commitment to the process.

### Financing and assistance

While governing bodies have been incentivizing decarbonization for several years, 2022 proved to be a landmark year for large-scale initiatives and available funding. The [Inflation Reduction Act](#) passed in August 2022 outlines unprecedented funding to support decarbonization initiatives over the next decade. This funding will take the form of incentives, tax credits and grants to help public and private organizations reduce their GHG emissions.

In addition to federal incentives, other government programs offer support, structure and technical assistance. These include the Department of Energy’s [50001 Ready](#) and the [Better Climate Challenge](#).

## Conclusion

SMBs in the commercial and industrial sectors need to address their environmental impact to remain resilient and ensure against rising energy costs and competitive pressure. Additionally, carbon responsibility is increasing in priority for investors, employees, corporate clients and customers. While measuring their carbon footprint and reducing energy use, businesses can benefit from available tax credits, funding, and resources to offset upfront costs for their longer-term decarbonization initiatives. Preparation is key—the biggest success driver for decarbonization is not budget, but a sustained commitment to change.

“Twenty-five years ago people could be excused for not knowing much, or doing much, about climate change. Today we have no excuse.

**Desmond Tutu**