# The Carbon Sustainability Playbook

## A ROADMAP FOR SMALL AND MEDIUM ENTERPRISES READY FOR CLIMATE ACTION

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# Foreword

Climate change is one of the most pressing global challenges today. The magnitude of action required to address climate change—in keeping with the Paris Agreement and Minnesota's Next Generation Energy Act—is very large and will require many solutions from many different sources. Local businesses are a key group who can lead the way when it comes to climate action, and many are already beginning to develop corporate climate commitments, sustainability goals, and carbon reduction strategies.

Climate and sustainability goals are increasingly important for companies trying to meet customer demands or respond to the latest climate science. While large corporations may have the benefits of coalitions like the CEO Climate Dialogue or The Climate Pledge, fewer resources are available for small and medium enterprises (SMEs). Yet, because over 80 percent of American establishments employ fewer than 500 individuals, we know that SME action will be critical to overall state, regional and federal climate action.

To achieve greater sustainability, SMEs need more resources aimed specifically to help them. Through this playbook, we hope to outline a simple, achievable process to creating and implementing a sustainability action plan—informed with resources tailored to support smaller companies and vetted by Minnesotan companies.

Meeting the challenge of climate change will require the simultaneous deployment of several strategies. For example, we will need to leverage natural climate solutions to offset emissions that remain even after companies and individuals make progress on reducing their emissions. SMEs wishing to improve their sustainability metrics can follow the seven-step process outlined in this document to significantly reduce their carbon emissions.

The Nature Conservancy is committed to conserve the lands and waters on which all life depends. We know that we must tackle climate change to meet that mission, and to enable our communities—both human and natural—to continue thriving. We hope you find this playbook a useful guide to jumpstart your company's action on climate change.

Sincerely,

Ann Mulholland, Chapter Director
The Nature Conservancy in Minnesota, North Dakota & South Dakota

# Introduction

This Carbon Sustainability Playbook is a curation of outside resources/links organized into steps for small and medium-sized businesses (under 250 employees) to reduce their carbon footprints. Each of the seven steps has a recommended process and a section for further resources. Each resource is briefly described with how it can be used, so businesses know where to find information and tools for climate sustainability. Additionally, there are sector-specific ways to take action, such as methods to reduce emissions in the construction industry.

The global climate crisis is making itself more and more evident each year as temperatures rise, extreme weather worsens, ecosystems become impaired and communities lose their livelihoods. Minnesotan temperatures are rising faster than the global average, and both summer and winter temperatures will likely increase by more than 3.3 degrees Celsius above preindustrial levels in the next 50 years, more flooding, extreme heat events and loss of biodiversity that is critical for life on this planet. Carbon dioxide, the foremost greenhouse gas impacting climate, is emitted during combustion. And although renewable energy sources are becoming more prevalent, the majority of US energy comes from carbon-emitting sources. It is up to all of us to work to reduce our greenhouse gas emissions to mitigate the dangerous effects of climate change. Businesses — even small businesses — have a major opportunity to create change and manage emissions sustainably.

Reducing greenhouse gas emissions provides many benefits to businesses, apart from the environmental impact alone. As described by the SME Climate Hub, business incentives for taking climate action include:

- Gaining a competitive edge with consumers and investors
- Managing business risk caused by climate change
- Improving efficiency and reducing costs
- Enhancing access to capital and affordable insurance

Because of rising pressure from policymakers, investors and consumers, taking action now will give your business an advantage in the future.

## About Carbon Targets

The Intergovernmental Panel on Climate Change (IPCC) has outlined goals for greenhouse gas emissions based on the Paris Climate Agreement. In order to align your business with these targets, **$CO_2$e emissions should be halved by 2030, and net-zero by 2050**. In Minnesota, the Next Generation Energy Act set an 80% reduction goal for greenhouse gas emissions between 2005 and 2050. As you can see from the MN Pollution Control Agency's data, the state's progress is not on track with those targets. With over 500,000 small and medium sized businesses in Minnesota (and over 55,000 in the construction industry alone), it's important for businesses to take swift and significant action to meet Minnesota's emissions goals.

# The Simple Start to Carbon Sustainability



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Tackling carbon sustainability can be overwhelming at first— especially for small and medium sized businesses that may have fewer resources, time or wherewithal. It's important to remember that all progress is good progress. **Even if** your business is only able to take one simple action, like opting to purchase renewable electricity from your utility, it's a step in the right direction and will keep the values of sustainability on your mind. Here are a few of the most impactful feasible actions for businesses new to

the world of carbon sustainability. The later sections of this guide outline the more comprehensive steps for making carbon sustainability a greater focus in your company.

1. Consider implementing [natural climate solutions](#) by planting trees or other perennial plants to ensure year-round soil cover.
2. Use a power strip for any office machines or computers and unplug when not in use. Plugged-in electronics/appliances still burn energy when they are not being used (sometimes even when turned off).
3. Contact your utility company for an energy audit.
4. Reduce waste as much as possible (paper, printing, food waste, single-use plastics, boxes, etc).
5. Reduce transportation emissions by limiting air travel and encouraging employees to walk, bike or bus where possible.

# 1. Commit to Action

Before taking any formal action, your business needs to make the decision to commit to carbon sustainability. Whatever your motivation, it's important to plan ahead and make sure your organization is ready to take on the work.

1. Read the rest of the steps in this Playbook. Make sure you understand the general recommended process; if any steps are unclear, look into the Further Resources section or find additional guides and explanations online.

2. Identify relevant staff (e.g., operations team to address electricity-related emissions; procurement teams to discuss materials) to pilot, implement, and scale opportunities for reducing emissions, and make sure all employees are engaged with these new practices.

3. Solicit early input from supporters. This may include vocal board members, local environmental committees, major clients or customers, or executive staff. Gather information on what expectations, ideas or advice they may have for you.

4. Lay out a proposed timeline for the process in this Playbook. Include allotted time for each step, with details on which resources you will be using and how it will be completed. Understand that this timeline is not rigid — your business may need to adjust along the way. Having a plan beforehand will encourage accountability check-ins and affirm your commitment to carbon sustainability.

# 2. Measure Your Carbon Footprint

The first step in making reductions is to measure your current carbon footprint to use as a baseline. A current estimate is necessary in setting a reduction goal, and you may find "hotspots" of high emissions that you can make specified targets for. If you take a baseline measurement, you'll be able to see how effective your reductions have been over time and can substantiate goals and achievements you share with the public.

## Recommended Process

1. Decide which activities of emissions you will be monitoring. A comprehensive carbon footprint will include all areas of your business's operations, including upstream and downstream impacts. Some businesses may prefer to begin with a measurement of emissions from materials, direct fossil fuel use and electricity consumption.

Carbon emissions from businesses are categorized into **three scopes**, depending on the source of the emission. These three scopes take into account direct and indirect emissions from your company, and are used for measuring, tracking, and reporting greenhouse gas emissions. Read this site from Level Ten Energy to learn about the scopes and examples of actions you could take to reduce the emissions from each.
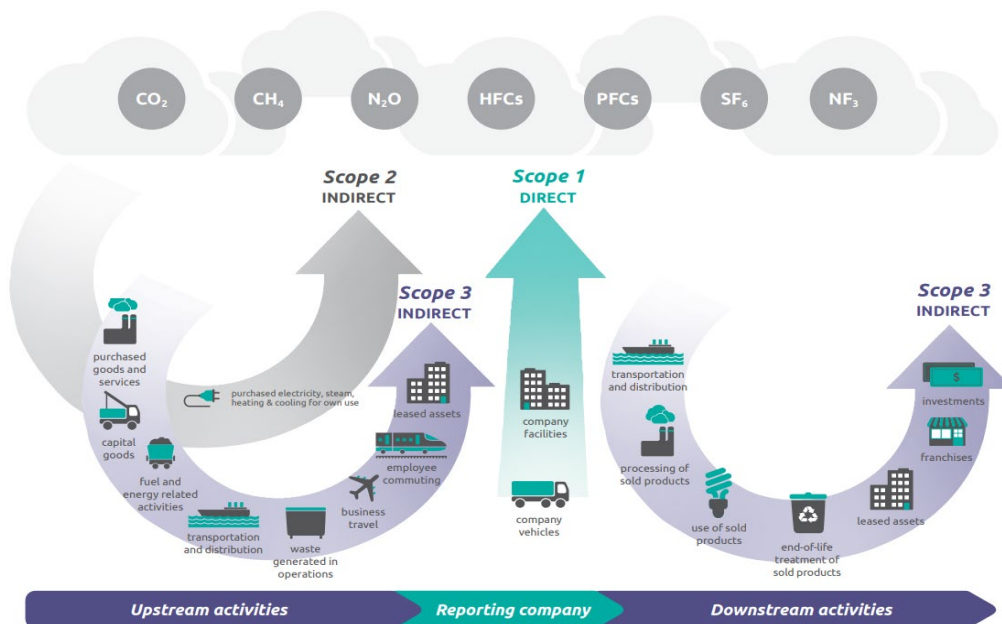


Source: GHG Protocol

2. Decide on a base year (usually the last full calendar year).

3. Collect data on the activities in your scope (like kWh of electricity, etc).

4. Multiply by the emissions factors known for that activity (such as XX tons $CO_2$ per kWh of electricity).

5. Convert any non-carbon greenhouse gases to their $CO_2$ equivalent by multiplying the tons by their Global Warming Potential (GWP).

6. Add the results from each activity— this is your baseline measurement.

## Further Resources

Although you can carry out this process on your own, there are many online resources that make this easier. Here are some of the most popular:

a. Greenhouse Gas Protocol: The world's most widely used greenhouse gas accounting standards. The corporate standards document goes into detail on what businesses need to account for when tracking emissions. You can use the Cross-sector Calculation Tools for guidance and spreadsheet worksheets for your business.



b. EPA's Simplified GHG Emissions Calculator: Made specifically for small businesses and low emitters, this spreadsheet calculates annual greenhouse gas emissions from your entered activity data. Consult the EPA's corresponding guide for more information on how to use this tool.

c. Sustainability Accounting Standards Board: SASB provides standards for measuring and communicating financially material sustainability factors, so that institutional investors can make informed decisions and businesses can identify how ESG topics will affect them the most. You can select your industry and download the SASB Standards and download the Greenhouse Gas Implementation Supplement for a deeper look. For a quick overview, view the SASB Materiality Map using "GHG Emissions" on the left side to see accounting metrics specific to your industry.

d. Plan A: One of many available all-in-one tools for measuring, reducing, and offsetting carbon emissions with footprint analysis and action plans.

e. Terrapass, Carbonfund.org, CoolCalifornia.org: These carbon footprint calculators, among many others on the internet, are quick and accessible—best used for estimation.

f. Another option is to hire a consultant to measure your business's carbon footprint. Many consulting services will also help you identify hotspots or actions for reduction.

# 3. Set Carbon Reduction Goals



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Now that you have an idea of your current emissions, the next step in reducing your carbon footprint is creating a specific, achievable and science-based goal for your business. Understanding guidelines and

setting a tangible goal will demonstrate that your business is committed to taking action and will help you make decisions about reductions later on.

## Recommended Process

1. Consider making your target "science-based" in which your business aligns with the IPCC recommendation to achieve the necessary emissions reductions based on the Paris Agreement: 50% reduction by 2030, net-zero by 2050. Although this reduction target is highly recommended, if this goal feels unobtainable, it's okay to set a less intensive target!

2. Decide on whether to measure your reduction in tons of carbon equivalent, percentage decrease, or a net-zero goal. For perspective, a 50% reduction in 10 years would be just under a 7% reduction per year. A percentage can provide clearer context to the public, but companies anticipating growth may benefit from a numerical ton goal paired with a metric such as XX tons of $CO_2$ per dollar amount of profit, number of employees, or square footage of office space.
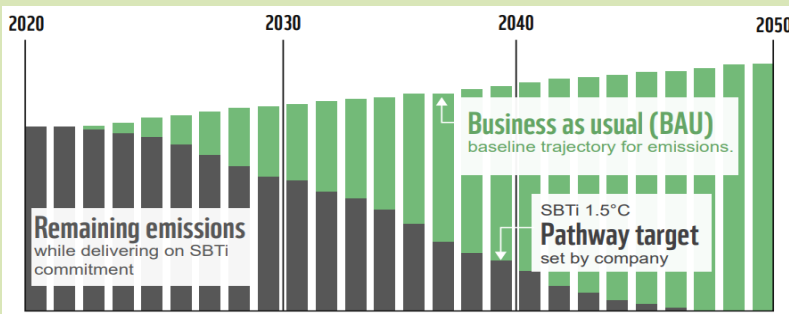


For example, a company sets and delivers on their SBTi 1.5°C target. The gray bars reflect 'remaining emissions' as the company works toward reductions.

Source: Beyond Science-Based Targets: A Blueprint for Corporate Action on Climate and Nature - WWF, BCG

## Goal Setting Example

A small business uses 2020 as their base year and calculates 1000 tons of CO2e emissions per year. Setting a science-based target could look like:

» **Reduction of 600 tons per year by 2030.** (Could use a normalizing factor such as "per employee" if anticipating changes).

» **50% decrease in emissions by 2030, with 30% by 2025.**

» **Carbon neutral by 2050, halved emissions by 2030.**

During their carbon calculations, a small business notices that heating and electricity in office spaces accounts for 70% of their total carbon emissions - a hotspot. This business may consider making adding a specified goal such as:

» **40% decrease in heating and electricity emissions by 2025.**

3. Consider any possible hotspots identified while measuring your current carbon footprint. If a large percentage of your emissions comes from one source, it may be helpful to set more specific targets for these activities to help focus your efforts on the highest-emitting sources.
4. Decide on specific time frames for reduction. If you are setting a longer-term goal, consider setting yearly targets or other midway goals to help keep your progress on track. Generally, your first milestone should be no later than 2030.

## Further Resources

There are also accessible resources for setting goals that can also help your business achieve them and communicate success.

a. Science Based Targets: Businesses can submit a target form, have it reviewed against science-based criteria, and when approved, SBTi will publish your company on their websites and send a welcome pack with advice on how to communicate your new target. View the "Set a target" page to see steps, and make sure to note the streamlined pathway for an SME.

| DEVELOP | SUBMIT | COMMUNICATE | DISCLOSE |
|---|---|---|---|
| Work on an emissions reduction target in line with the SBTi's criteria | Present your target to the SBTi for official validation | Announce your target and inform your stakeholders | Report company-wide emissions and progress against targets on an annual basis |

b. SME Climate Hub: A target-setting tool designed specifically for small and medium sized enterprises. Businesses can commit to the carbon sustainability goal, use the tools and resources to help decrease yearly greenhouse gas emissions, become recognized by the UN Race to Zero campaign and receive other benefits and incentives along the way.

# 4.  Develop Strategies for Avoiding and Reducing Carbon Emissions



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Reducing carbon emissions starts with changing a business's practices directly: **first by avoiding** any emission sources, **then by reducing** the emissions from sources that cannot be

avoided altogether. Lowering emissions is not only critical for mitigating climate change, but it also benefits your business by cutting out unnecessary energy use and waste.


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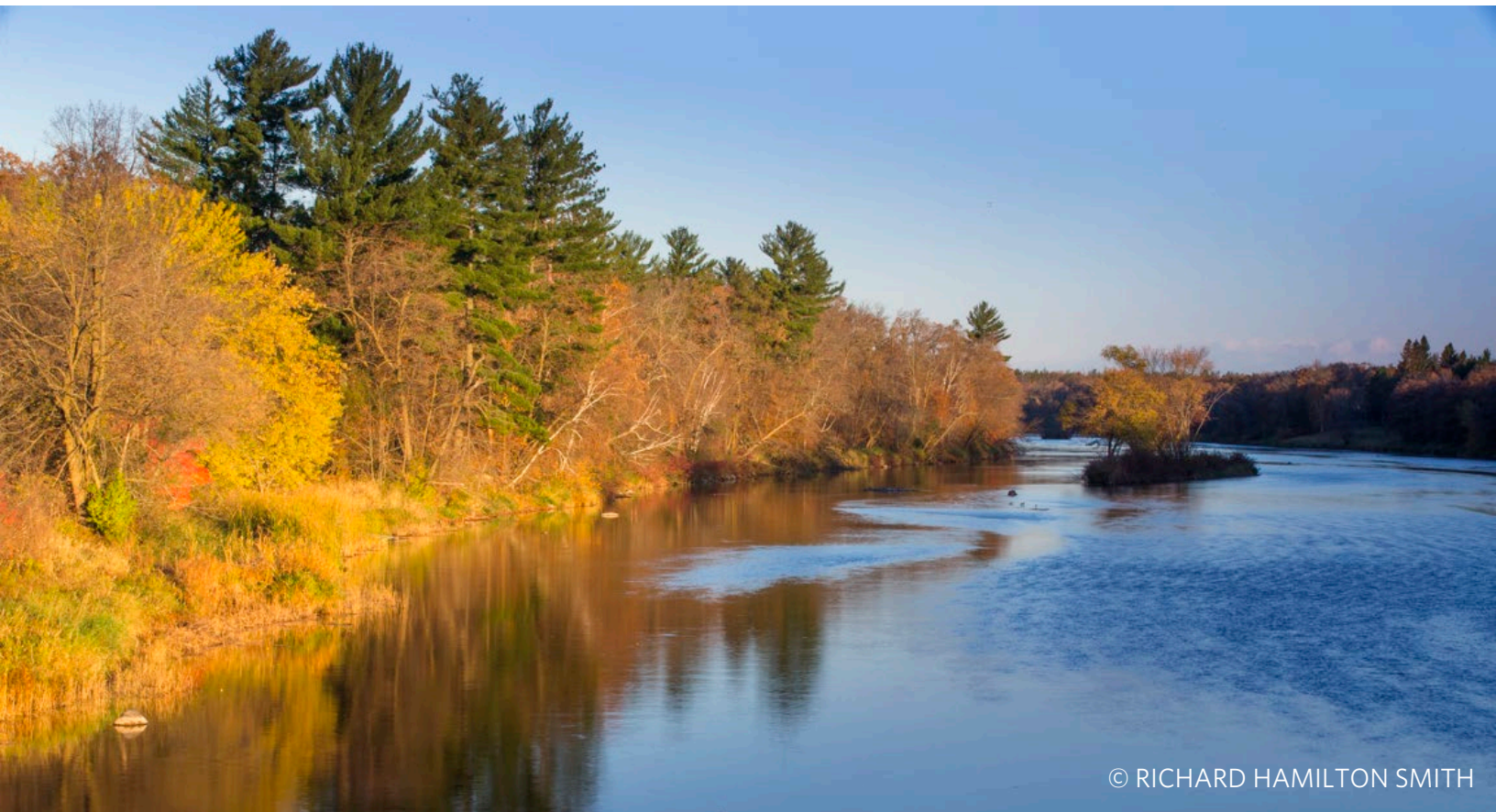
## Recommended Process

1. Identify opportunities for your company to reduce the emissions associated with each source you identified in Step 2 (see ideas below). Remember to prioritize avoidance over reduction (e.g. it is better to go paperless than to simply reduce paper use, but of course either is better than no action).
2. Ensure that the magnitude of these opportunities aligns with the magnitude of the goal set in Step 3. Try to estimate potential emissions, gas, or energy savings while creating your list of actions.
3. Make a plan of implementation with your list of reduction opportunities, including when and how to make each change.

Here is a list by GreenBiz of accessible, low-cost actions for small and medium-sized businesses (some may not apply depending on sector). More specified ideas can be found online by searching within your industry.

- Use a power strip for any office machines or computers and unplug when not in use. Plugged-in electronics/appliances still burn energy when they are not being used (sometimes even when turned off).
- Contact your utility company for an energy audit.
- Reduce paper printing, print double-sided when possible, and seek recycled paper products.
- In an office eating area, limit single-use products like paper plates, utensils, etc, and compost organic waste.
- Reuse boxes/supplies whenever possible.
- Recycle.
- If you ship, use recycled paper, cardboard, or compostable packaging instead of plastic.
- Limit travel and work commutes, and/or invest in cleaner fuels and more efficient vehicles
- Choose carbon-neutral vendors and examine the sustainability within your supply chain.
- Consider implementing natural climate solutions by planting trees or other perennial plants to ensure year-round soil cover.

> ## Reduction Success Story
>
> One small creative services business (Bowman Design Group) decided to find cost-saving opportunities to reduce greenhouse gas emissions. Within a year of action, they cut their annual carbon emissions by 65% AND cut costs for electricity by 40%, gasoline by 59%, and water by 20%. With less equipment maintenance, paper/toner, and other products, they saved about $9,000 per year, which they then used to fund further energy-efficiency upgrades.
>
> They budgeted three times their annual utility costs (recommended) for efficiency upgrades.
>
> Here's where they found success:
> - Traded the company car for a model with higher mileage
> - Called utility company for an energy audit, which re-lamped the building and offered them a program to cycle air conditioner throughout the day
> - Turned power strips off at night
> - Replaced copier with an energy-efficient, multi-function machine
>
> Source: Yale Environment 360
> - Replaced AC with most energy efficient model they could afford

As an expansion of this playbook, there are specific actions for reducing emissions in the construction industry (also available in appendix).

## Local Resources

a. The Center for Energy and the Environment is now offering free/low cost energy efficiency services for Minnesota businesses with a monthly electricity demand of 400 kW or less. This includes significant rebates for lighting and HVAC improvements and free smart thermostats. Read about the One-Stop Efficiency Shop program to learn more.

b. Explore energy-related best practices through Clean Energy Economy Minnesota.

c. The Nature Conservancy published a report of Nature and Climate Solutions in Minnesota. This explains how utilizing nature can help sequester carbon and mitigate climate change, with multiple actionable suggestions.

d. Engage Sustainable Growth Coalition for partnership around sustainability and circularity principles.

e. Check out recommendations by leading climate organizations like C2ES.

# 5. Offset Unavoidable Emissions

After making a plan and taking action to reduce emissions within your business, remaining unavoidable emissions can be "offset" by funding outside projects that reduce greenhouse gas emissions or sequester carbon from the air. The Nature Conservancy is one example of an organization that carries out high quality nature-based offset projects (contact your local TNC chapter office for more information on offset opportunities). Offsetting can be used to meet your carbon emissions goals when all viable reduction options have been exhausted. If the project is verified, your business can "claim" the resulting carbon reductions/sequestrations while investing in sustainable environmental practices

> ### Offset Success Story
>
> Etsy became the first major online shopping destination to offset 100% of carbon emissions from shipping. By partnering with a carbon offset company, they are investing in sustainable forest harvesting, wind energy, solar development, and technology for reducing automotive emissions of sulfur hexafluoride. They promote this accomplishment to customers under every order and on their website.
>
> Source: Etsy

## Recommended Process

1. Invest in further emission reductions: If some actions aren't feasible within your business right now, invest in further upgrades that will reduce your long term emissions.

2. Use voluntary carbon market offsets: Businesses can purchase carbon offset credits, where each credit is equal to 1 ton of $CO_2$ equivalent reduced from the air. To understand the basics of how

carbon offsets work, refer to GHG Management Institute's and SEI's guide. Many carbon offset projects focus on improving and restoring natural systems; you can learn more about these impactful "natural climate solutions" on Nature4Climate.

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## Carbon Offset Programs

Carbon offsets may be purchased through a number of different providers. For example, Terrapass has a large offering of carbon offset programs to invest in. On their "Projects" page, you can browse current opportunities or read about the standards for evaluating the credibility of these projects.

Other carbon offset organizations include:

South Pole      Cool Effect      Native      Clear      MyClimate

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## Further Resources

a. High Quality Carbon Offset Guide: It's important to make sure carbon offset projects are quality and credible in order to assure that your business is actually offsetting the amount you claim. Besides the different third-party standards, there are general requirements of quality offsets described in this page. When selecting, make sure you can find details and information for each project. To know how to avoid low-quality offsets, visit their additional guide here.

b. Renewable Energy Certificates (RECs): As explained in the EPA's Green Power Partnership guide, "RECs are issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource." By buying certificates, your business is buying the "renewable" aspect of energy from the power grid, and therefore supporting the renewable energy industry. You can find RECs on the Buy clean energy site, or see more general options on Terrapass.

# 6.  Track Progress and Update

Each year, plan to evaluate the results of your actions by tracking your carbon footprint. Take corrective actions when needed and update the plan to reflect your progress. Tracking progress is a great way to see how effective your actions have been so far and spot areas that can be improved. Updating your plan will help you meet your carbon goals and show that your business is staying accountable.

## Further Resources

a.  EPA's Simplified Inventory Management Plan Form: As an expansion of the Simplified GHG Emissions Calculator noted above, this worksheet helps to develop and update the processes for your action plan. See the EPA's GHG Inventory Guidance for Low Emitters site to see how their tools can be used together.

# 7. Communicate

Throughout the entire process of setting targets, measuring your emissions and taking action, it's important to communicate openly to the public, your employees and any investors. This will not only give you recognition and a positive reputation but will ensure that your business is being transparent with your efforts.

## Recommended Process

1. Engage your board and employees in your process. What have you accomplished? What's next?
2. Provide your carbon goals, with regular updates, through newsletters, social media posts or on your website to enhance transparency.
3. Reflect on opportunities for scaling your progress by becoming part of a larger movement. If possible, consider engaging your city or local chamber of commerce to discuss your work and any additional needs you may have.
4. Consider compiling an annual environmental impact report.

## Further Resources

In addition to publishing information on your own, there are larger disclosure systems that are widely used.

1. There are many environmental forums that can engage your business in collaboration with businesses who have similar carbon concerns. This list is a jumping off point, there are many opportunities online specific to different industries.
   a. Green Chemistry and Commerce Council
   b. Retail Industry Leaders Association
   c. Beverage Industry Environmental Roundtable
   d. Carbon Leadership Forum - Construction
   e. Textile Exchange
   f. Sustainable Packaging Coalition
   g. Sustainable Apparel Coalition
2. Carbon Disclosure Project: CDP is the global environmental disclosure system. Completing the questionnaires will help your company identify risks and opportunities for other sustainability issues, and will report your information to customers, investors and the market along with analysis and insights.
3. The Climate Registry: A reporting system specific to greenhouse gas emissions. Businesses can become a member or create an account for access to a verification system and various recognition programs. For more information, see their Greenhouse Gas Reporting for Small Businesses document.

## THE REPORTING PROCESS



4. Task Force on Climate-related Financial Disclosures: View the "Recommendations" page to see guidelines for effective climate-related disclosures based on transparency.

# Additional Recommended Readings

a. "Foundations for Science-Based Net-Zero Target Setting in the Corporate Sector"- SBTi
b. "The 1.5°C Business Playbook"- Exponential Roadmap Initiative
c. "Beyond Science-Based Targets: A Blueprint for Corporate Action on Climate and Nature"- WWF, BCG

# Appendix

## Acronyms

- <u>SME</u>: Small and Medium-Sized Enterprises
- <u>IPCC</u>: Intergovernmental Panel on Climate Change
- <u>GWP</u>: Global Warming Potential
- <u>$CO_2e$</u>: Carbon Dioxide Equivalent (greenhouse gas amount equal to the GWP equivalent in carbon dioxide)
- <u>GHG</u>: Greenhouse gas
- <u>EPA</u>: Environmental Protection Agency
- <u>SASB</u>: Sustainability Accounting Standards Board
- <u>ESG</u>: Environmental, Social, and Corporate Governance- the three central factors in measuring the sustainability and societal impact of an investment in a company or business.
- <u>C2ES</u>: Center for Climate and Energy Solutions
- <u>SBTi</u>: ScienceBased Targets Initiative
- <u>RECs</u>: Renewable Energy Certificates
- <u>WWF</u>: World Wildlife Fund
- <u>BCG</u>: Boston Consulting Group

**Many thanks to our intern, Violet Johnson, who compiled and prepared this roadmap.**

The Nature Conservancy
Minnesota