Constellation

Building a **Corporate Sustainability Strategy** for Your Business

Understanding the Impact Sustainability Has on Businesses

Many companies face growing expectations to operate in ways that support environmental responsibility. Research shows that sustainability has a positive impact on the environment and can support business success. Companies that prioritize sustainability often see benefits such as reduced costs, increased profits, improved public image and stronger employee satisfaction.1

Getting started on the path to sustainability can feel complex, especially when expectations, options and priorities start to compete. Implementing flexible approaches that fit your specific goals, operations and resources can help you prioritize what's important to your business.

A strong foundation for corporate sustainability begins with understanding key concepts such as greenhouse gases, emissions-reduction tactics and how to combine approaches to build a sustainability plan. With this knowledge, your organization can more effectively evaluate your options, set environmental goals and make measurable progress toward a cleaner energy future.

Defining Sustainability in a Corporate Context

» Sustainability is the practice of managing resources to meet an organization's current needs while supporting the ability of future generations to meet theirs. For businesses, corporate sustainability focuses on responsible resource use and environmental stewardship.

There are many components to sustainability, with emissions playing a significant role in overall climate impact driven by greenhouse gases. If your company wants to pursue sustainability, you can start by understanding its current emissions and identifying opportunities to reduce its carbon footprint.

The Basics of Greenhouse Gases

Greenhouse gases are chemical compounds in the Earth's atmosphere that trap heat and help regulate global temperature. This natural process creates a greenhouse effect and keeps the planet at a warm enough temperature to sustain life.

Human and business activities, such as facility operations, transportation and manufacturing processes, release greenhouse gases. As emissions increase, they intensify the greenhouse effect and contribute to long-term climate change. Key greenhouse gases include:

The Difference Between Carbon Emissions and Greenhouse Gas Emissions

Greenhouse gas emissions include all gases that contribute to atmospheric warming, including carbon dioxide, methane, nitrous oxide and fluorinated gases, while carbon emissions refer only to the emissions of carbon dioxide. Carbon dioxide makes up the majority of greenhouse gas emissions and is considered a major contributor to climate change. It's also the easiest greenhouse gas for businesses to manage through efficiency measures and purchased credits, which is why it's often prioritized in companies' sustainability efforts.

- **Carbon dioxide:** Making up about 80% of greenhouse gases, carbon dioxide is produced through natural processes such as respiration and volcanic activity, as well as human activities like fossil fuel burning, and solid waste decomposition.
- **Methane:** This greenhouse gas is released through natural decomposition processes, as well as human activities such as cattle farming, agriculture and fossil fuel transportation.
- **Nitrous oxide:** Emissions primarily come from farming practices with synthetic fertilizers and cattle ranching, along with fossil fuel combustion and wastewater treatment.
- **Fluorinated gases:** These potent gases are generated through the use of products such as refrigerants, aerosol propellants, solvents and fire retardants.

The Three Scopes of Emissions

The Greenhouse Gas Protocol2 classifies emissions into three categories based on their source and level of control or influence. Knowing where emissions come from across your operations can help you identify where emissions are highest and what changes would make the most significant impact.

- **Scope 1 emissions:** A direct result of your company's activities. This includes onsite generation, natural gas use and fleet fuel consumption. Scope 1 emissions can be broken down into four categories, including stationary combustion, mobile combustion, fugitive emissions and process emissions.

- **Scope 2 emissions:** Indirect emissions generated from purchases of electricity, steam, heating or cooling. Although these emissions occur at the point of generation, they are attributed to the company that purchases and consumes the energy.

- **Scope 3 emissions:** Indirect emissions from other sources, such as transportation, distribution, employee commuting and supply chain management. These emissions aren't produced directly by your company, and occur instead as a result of its operations.

Understanding how sustainability, emissions and greenhouse gases fit together gives you a clearer foundation for evaluating where your company stands today and what areas to focus on as you begin reducing emissions.

Advancing Toward Lower Carbon and Greenhouse Gas Emissions

- **Reduced emissions:** This initial stage focuses on lowering emissions through efficiency improvements.
- **Net-zero carbon emissions:** Also known as carbon neutrality, net-zero carbon emissions occur when your company removes or offsets the same amount of carbon from the atmosphere as it emits.
- **Zero emissions:** At this stage, your company does not produce any greenhouse gas emissions across its operations.

An increasing number of companies are committing to reducing greenhouse gas emissions, and those commitments are evolving as business priorities and available resources change. While the path looks different for every business, emissions-reduction efforts typically follow a similar progression:

The first step toward reducing emissions is understanding your current carbon footprint. Reviewing energy data across your facilities can provide insights and help identify patterns, opportunities for improvement and areas with the greatest impact. Key data sources include:

With a clearer picture of the emissions your company produces and how reductions typically progress, you're better positioned to identify which strategies and solutions will best support your operations.

1. Energy bills:

Monthly energy bills provide insight into your energy, water and sewer consumption. Regularly reviewing this data can reveal issues such as billing errors, operational issues or sudden increases in usage.

Manual reviews can identify trends, while automated tools can help streamline the process of identifying potential problems, so you can address any issues quickly and efficiently.

2. Machinery and equipment:

Aging systems and equipment, such as HVAC units, lighting or appliances, may consume more energy than newer alternatives. Replacing outdated systems with more energy-efficient upgrades can help reduce usage and emissions while improving performance.

3. Facility data:

Evaluating total facility performance helps identify seasonal or occupancy-driven trends. If you have multiple facilities, comparing them can also highlight any differences that could be contributing to higher energy usage or emissions so you can make adjustments where needed.

Combining Strategies to Reduce Emissions and Meet Sustainability Goals

Based on your current usage and emissions data, you can implement a set of strategies to meet your sustainability goals. Many organizations use a combination of these strategies to reduce emissions and progress toward zero emissions:

- **Implement efficiency upgrades:** Replacing inefficient equipment, such as light bulbs or outdated machinery components, with energy-efficient alternatives can reduce consumption while improving performance.
- **Credit emissions with RECs and EFECs:** Purchasing environmental attributes to match your annual grid electricity usage allows you to substantiate renewable or emissions-free electricity use claims when generation sources cannot be directly tracked on a shared utility grid. These attributes are issued as certificates tied to specific forms of electricity generation:
  - **Renewable energy certificates (RECs):** Represent the emissions-free attributes of one megawatt hour (MWh) of electricity generated from renewable energy sources such as wind or solar.
  - **Emission-free energy certificates (EFECs):** Represent the emissions-free attributes of generating sources that do not emit greenhouse gases.
- **Consider sustainable gas:** Renewable natural gas (RNG) is produced from organic waste sources like landfills, wastewater treatment plants and agricultural waste digesters. RNG can be used like standard natural gas or purchased through environmental attributes to match natural gas consumption onsite. This enables you to claim that your company is using natural gas generated from 100% renewable sources.
- **Purchase carbon offsets:** Carbon offsets support emissions-reduction projects such as forestry preservation, agriculture, water and waste management, methane capture and carbon sequestration. Offsets can be purchased to reduce or negate both onsite emissions (scope 1) and indirect emissions (scope 3).
- **Implement onsite renewable energy generation:** Installing systems like solar panels allow your organization to generate emissions-free energy and reduce reliance on fossil fuels.
- **Procure offsite renewables:** Offsite renewable solutions allow you to source emissions-free energy from existing wind, solar or other renewable generation facilities without the need to invest in onsite infrastructure.
- **Use 24/7 matching:** Align electricity use with a clean energy source located in the same regional grid in real time with Hourly Carbon-Free Energy Matching. This supports continuous clean energy usage every hour of the day, seven days a week, 365 days a year.

Setting the right combination depends on how your organization uses energy, the missions you're addressing and the goals you're working toward.

Supporting Your Sustainability Goals

Businesses choose different paths to sustainability based on their priorities and budget. Understanding how these options fit together can help you determine the right approach for your business.

Constellation offers a full suite of products and services, including energy efficiency solutions, on- and off-site clean energy and storage options, energy management tools, greenhouse gas monitoring and reporting and other services to help you meet your operational and sustainability goals.

Contact us to learn more about how we can help you build your sustainability roadmap and move toward a cleaner energy future.

[1]https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Profits%20with%20purpose/Profits%20with%20Purpose.ashx

[2]https://ghgprotocol.org/

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