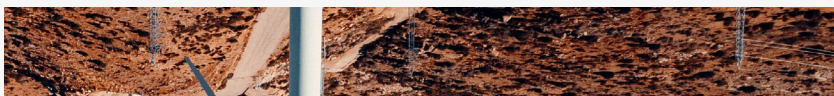




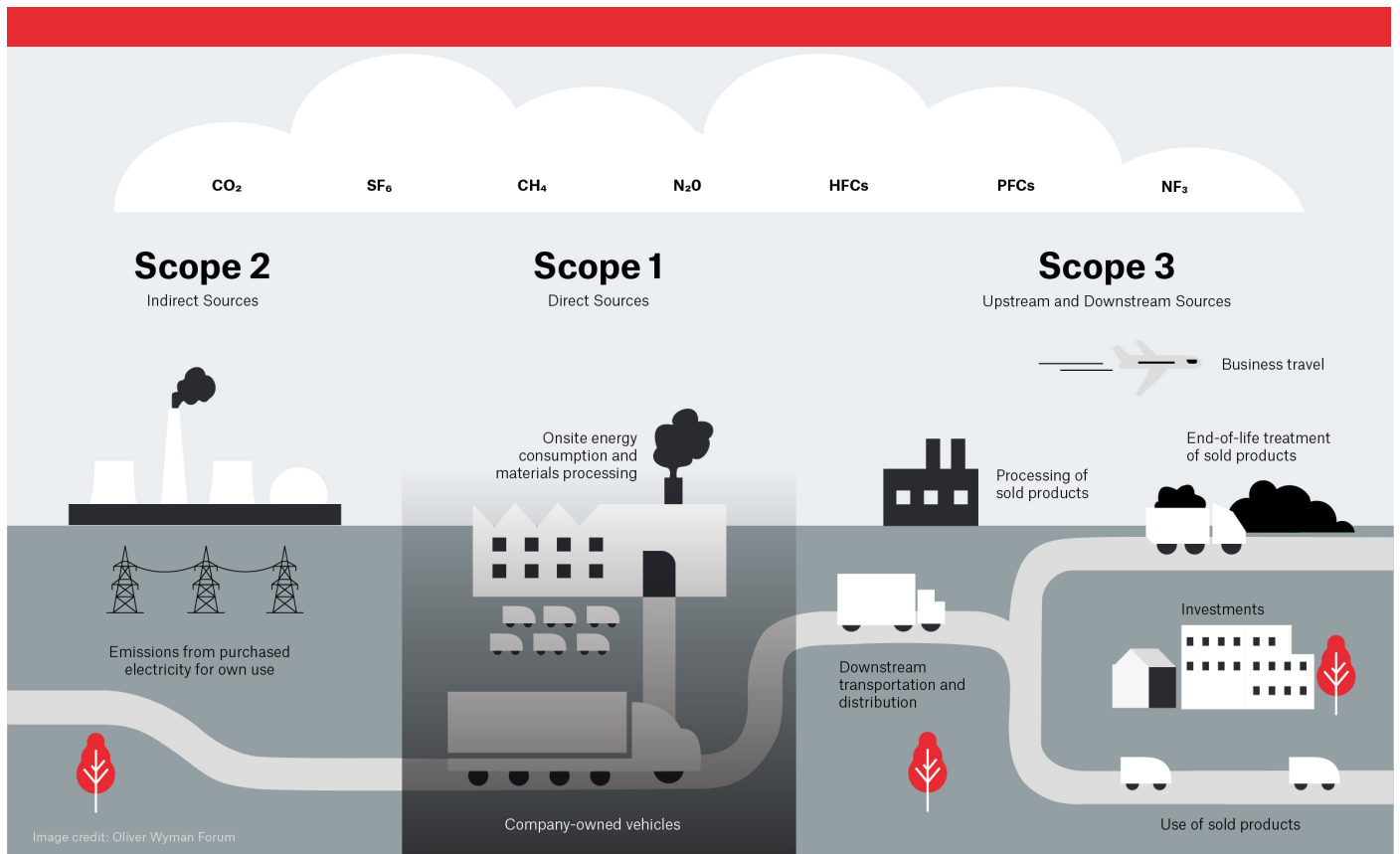
15 ways businesses can reduce their scope 1, 2, and 3 emissions



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Reducing scope 1, 2, and 3 emissions is one of the best ways for companies to boost their sustainability efforts, lower their **greenhouse gas emissions**, and meet their net zero targets.

That's why we've put together a list of 15 clear-cut ways in which companies can tangibly reduce their emissions, starting today.



What are scope 1, 2, and 3 emissions?

GHG emissions are divided into three separate scopes – scope 1, 2, and 3. Scope 1 emissions result from a company’s direct activities, such as the emissions produced by company-owned vehicles. Scope 2 emissions come from a company’s indirect activities, like the procured electricity it consumes. Scope 3 emissions stem from indirect sources in a company’s value chain, such as business travel, employee commuting, or a product’s end-of-life treatment.

It’s important to reduce your scope emissions for a number of reasons; it lets you contribute to the fight against climate change, increases investor confidence, fosters consumer trust, allows you to meet regulation requirements, and can even **reduce your operational costs**.

How to reduce scope 1 emissions

Because scope 1 emissions are directly under your organization's control, they should be relatively easy to identify. While changing the processes you've had in place for years or even decades can seem daunting, switching to more carbon-friendly methods could help you meet regulation standards, improve stakeholder satisfaction, and even cut some of your costs.



01 Switch out your fuels

GHG emissions from transportation come primarily from burning fossil fuel for our cars, trucks, ships, trains, and planes. This, combined with the fact that **over 90%** of the fuel used for transportation is petroleum-based (mainly gasoline and diesel), makes a strong case for switching to low-carbon fuels like **biofuels**, **renewable natural gas**, and **sustainable aviation fuels** in company-owned fleets.

Fact: SAF, a liquid fuel currently used in commercial aviation, can reduce CO2 emissions by **up to 80%**.

02 Invest in fleet electrification

Because electric vehicles (EVs) rely on internal combustion engines, they don't produce any tailpipe emissions, like carbon monoxide and nitrogen oxides. Additionally, EVs are more efficient at converting energy into motion, so they require less energy to travel the same distance.

Although they can be pricey to purchase, with well-managed electric charging, heavy-duty electric fleets can be up to 37% cheaper than diesel to fuel, and medium-duty EVs can prove 43% less expensive. Additionally, you could save even more by charging your fleet at off-peak hours. There are also often federal, state, or local **incentives** that help reduce the cost of purchasing an EV.

03 Decrease distances for transportation

Finding fuel-efficient routes lowers your emissions and fuel costs, minimizes delivery delays, and can even lengthen your fleet's lifespan. With **route optimization software**, you can avoid congested roads, minimize idling time, and optimize package distribution. For sea transportation, **weather routing** can significantly cut down on a vessel's fuel consumption by accounting for sea conditions.

04 Digitalize operations

Digitalizing operations can help streamline your supply chain processes, lower costs, increase operational efficiency, improve communication across your supply chain, and reduce your carbon footprint by providing real-time data on inventory, orders, and shipments. Armed with this knowledge, you can reduce excess on-site production and redundant deliveries made via company-owned fleets.



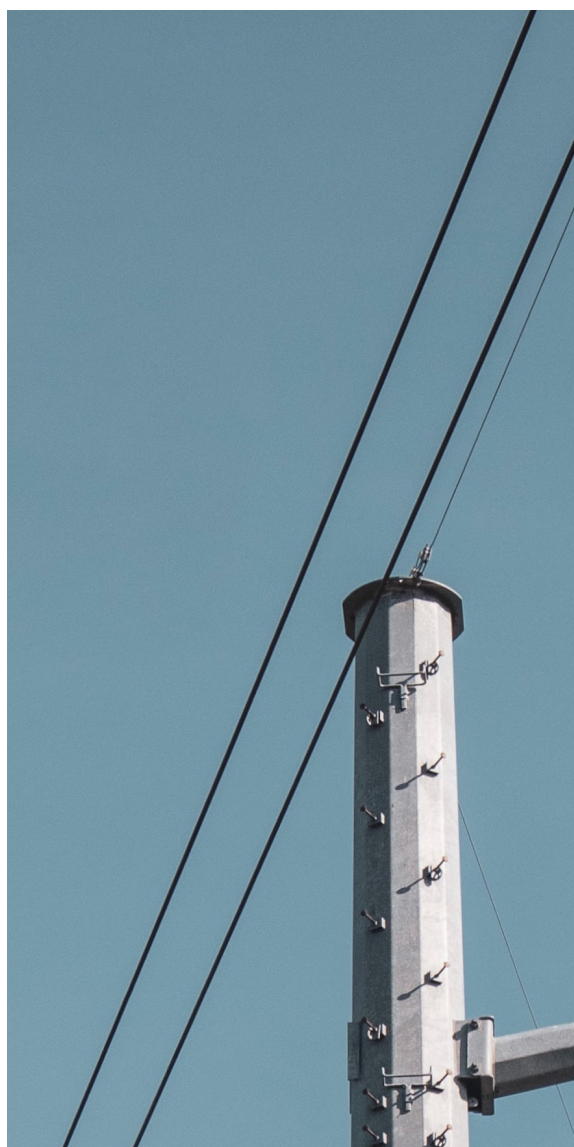
05 Practice carbon capture and sequestration (CCS)

CCS is the process of capturing the CO₂ that's formed during power generation and industrial processes and storing it before it's emitted into the atmosphere. Though on the expensive side, **CCS technologies** have the potential to greatly reduce emissions from new and existing coal- and gas-fired power plants and industrial processes. To perform CCS, you can consider installing a direct air capture system through companies such as **Aker Carbon Capture**, **Climeworks**, or **Carbon Engineering**.

Carbon is also absorbed naturally by plants, trees, soil, and oceans (otherwise known as carbon sinks), so you could also think about investing in afforestation and reforestation projects.

How to reduce scope 2 emissions

Since the lion's share of scope 2 emissions are a result of electricity usage, lowering your energy consumption is key to reducing your scope 2s. Aside from simply turning off and unplugging lights and electronics when not in use, you can boost your energy efficiency in a number of ways.



01 Invest in energy-efficient technologies

Purchasing office equipment that's ENERGY STAR certified or energy efficient according to their EU energy labels can dramatically reduce your overall energy consumption. In fact, according to the EPA, over **1.5 billion pounds** (750,000 tons) of GHG emissions could be saved if everyone in the US switched to using ENERGY STAR-certified products. That's the equivalent of taking 158,000 cars off the road.

02 Reduce HVAC usage

Considering that heating, ventilation, and air conditioning (HVAC) systems are responsible for up to **50%** of a building's total energy consumption, it only makes sense to reduce their use and make them more efficient.

New HVAC systems are around **30-40% more energy efficient**, but they can also be pricey and the environmental impact of disposing of your old system isn't trivial. Instead of purchasing a brand-new HVAC system, you could consider retrofitting your existing system, replacing old parts with new components.

Another good option would be to use **HVAC optimization technologies**, which learn continuously and become more efficient over time. These solutions can end up saving energy and costs, increasing occupant comfort, and lengthening equipment life.

03 Invest in LEDs and smart lighting

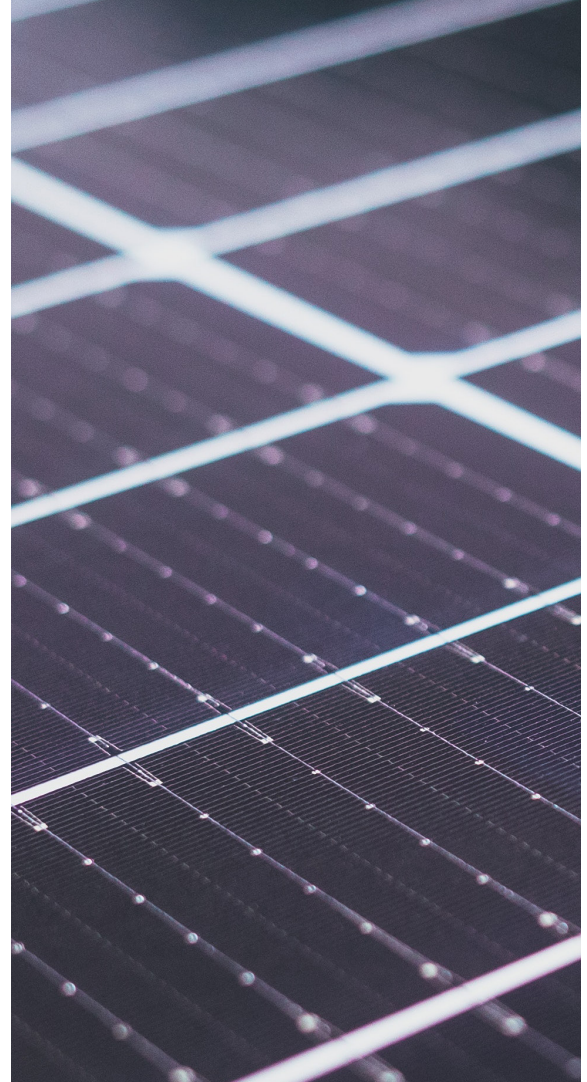
Switching to LEDs makes sense both environmentally and economically, as they not only **last up to 25 times longer** than their incandescent counterparts, but they also use at least **75% less energy**.

What's more, smart LED lights use embedded IoT software that allows you to automate lighting schedules and lets building occupants personalize their preferred lighting settings, further reducing energy consumption and saving you money in the long term.

Fact: Europe began to phase out LEDs in 2009 and, starting in 2023, the **US is following suit**.

04 Weatherize your building

Improving your **building's insulation** and window seals will go a long way toward reducing your energy consumption, particularly in the winter. While you're at it, you can also check your plumbing and caulking to prevent leaks and drafts and have your roof inspected to ensure you have decent insulation and ventilation.



05 Use renewable energy

Renewable energy is one of the **world's cheapest energy sources** and generated a whopping **28.7% of the world's electricity** in 2021. Part of the reason for the growth in its usage stems from technological advancements.

To lower your reliance on fossil fuels for generating electricity, you can consider using renewable sources of energy by installing solar panels or, if you produce a lot of waste, like wood chips, paper, or sewage, you can investigate installing a biomass or biogas system.

You can also participate in a **utility green tariff program**, where you pay a specialized rate and your utility provider supplies you with renewable energy.

Fact: Renewables are officially the **cheapest form of power** and could potentially decarbonize **90% of the power sector** by 2050.

How to reduce scope 3 emissions

Just because Scope 3 emissions are notoriously slippery to address doesn't mean there's nothing to be done about them. In fact, they probably make up a large portion of your organization's carbon footprint. This means that making seemingly small changes to your scope 3s could end up having a big impact on your overall emissions.



01 Cut down on business travel

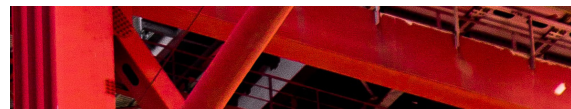
Flights account for about **90% of business travel emissions**. For companies looking to meet emissions reduction targets, cutting down on air travel is a clear-cut solution. To reduce unnecessary business trips, consider using video conferencing instead. You could also prioritize local clients, limit the number of employees needed to attend a meeting or an event, and consolidate multiple journeys. To further reduce business travel emissions, you can encourage your employees to use public transportation instead of renting cars.

Fact: In Europe, corporate travelers are responsible for **around 30% of transport emissions**.

02 Incentivize greener commuting

Commuting takes time and results in emissions. Consider whether employees really need to come into the office or if their work can be done from home instead. If your employees must be in-office, you can encourage or incentivize them to use public transport, ride their bikes to work, or carpool with colleagues.

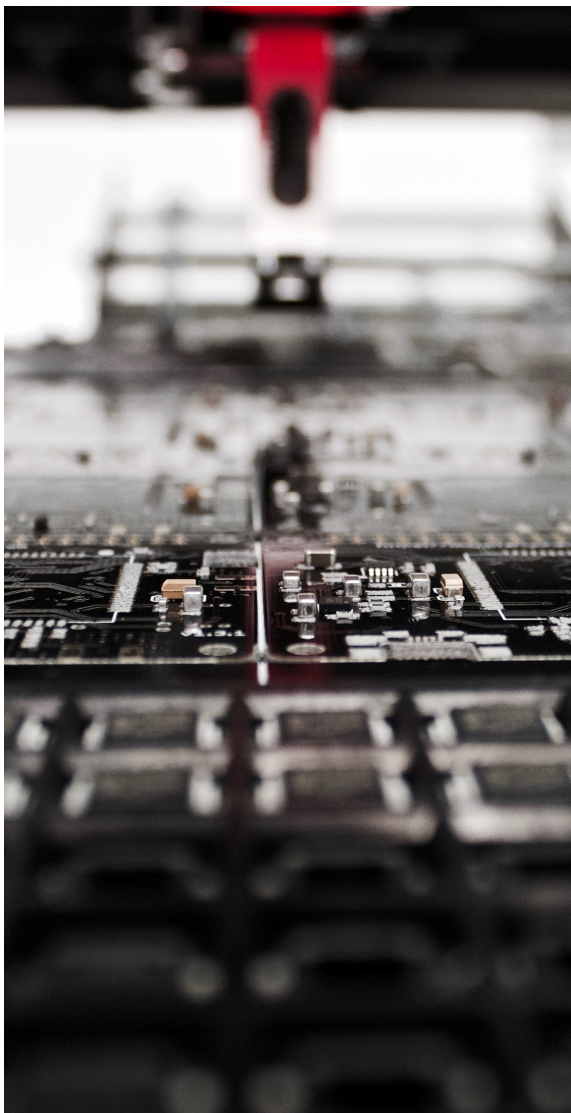
Tip: Consider offering employees public transport stipends as an incentive.



03 Reduce waste

Waste is one of the most tangible ways to reduce your carbon emissions. Using reusable coffee mugs, plates, and utensils; purchasing compostable paper napkins; and replacing bottled water with a tap filter could take a sizeable chunk out of your overall emissions.

Fact: The amount of GHGs emitted from municipal solid waste landfills in 2020 were equivalent to the emissions of about 20.3 million passenger vehicles driven for one year.



04 Make your products more environmentally friendly

You can cut some of your scope 3 emissions by rethinking your design, manufacturing, and packaging processes. Examples of this include making your packaging easily recyclable or using **smart packaging** (which includes features like smart labels that indicate a product's recycling instructions). You could also consider producing goods using recycled or low-impact materials, or better-quality materials that last longer.

Integrating **eco-design** into your processes, where the whole life cycle of the product and its impact on the environment is considered, not only reduces your emissions but could also lower your costs over time.

Fact: The European Commission recently presented a package of **European Green Deal** proposals to make sustainable products the norm in the EU.

05 Implement technology in your supply chain

Employing technology throughout a product's entire lifecycle has the potential to significantly lessen a company's carbon footprint. Encouraging your outsourced delivery services to employ **artificial intelligence**, for example, can reduce emissions by optimizing supply chains through improved demand prediction (to reduce overproduction), mapping delivery routes more efficiently, shortening delivery times and minimizing fuel consumption.

Want to learn more about how BrainBox AI can help you reduce your Scope 1 & 2 emissions?

[Visit our website](#) ↗