ENERGY to care

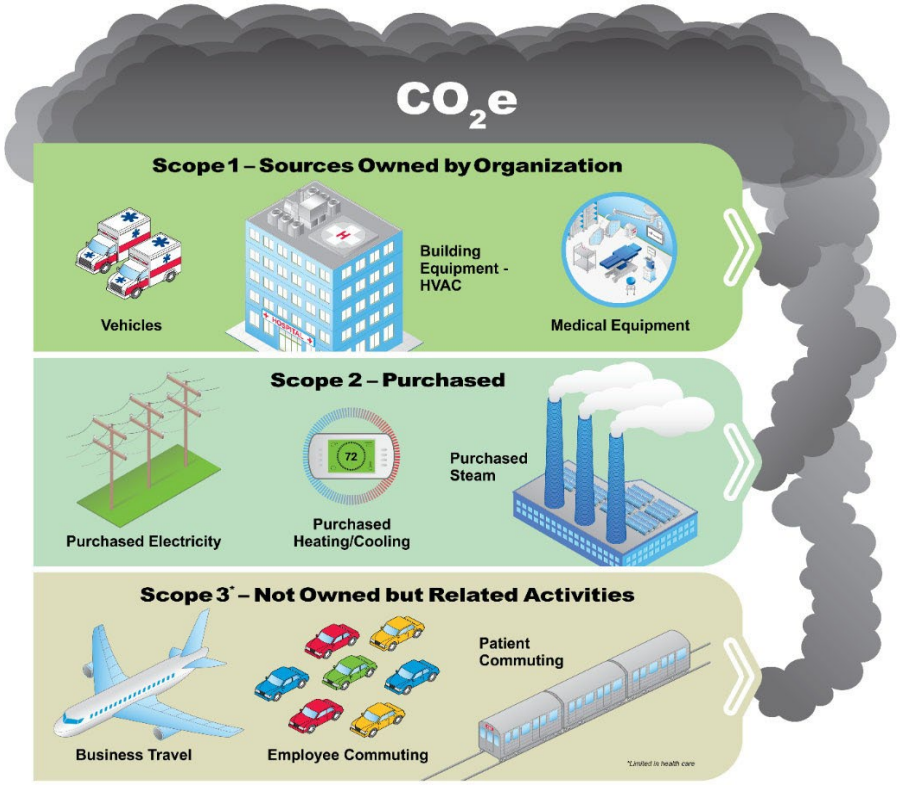
Greater efficiency supports patient care.

Greenhouse Gas Emissions – Scope 1

All ECM content was independently developed and reviewed to be vendor, product and service provider neutral.

Description

Greenhouse gas (GHG) emissions in the Scope 1 category are direct emissions from sources owned or controlled by the organization. This includes heating items that directly burn natural gas and heating oil, and any other fuel burned on-site. Scope 1 emissions also include fuel used for backup generators (such as diesel) and vehicle emissions for any organization-owned vehicles.



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Project Talking Points

- The World Resources Institute (WRI) provides the Greenhouse Gas Protocol, which is the global standard for companies and organizations measuring and managing their GHG emissions.
- Defining emission scopes is critical to ensure the world's carbon is attributed to its sources accurately. The protocol provides fair and accurate accounting while minimizing the risk of double counting by multiple organizations.
- Greenhouse gases include Carbon Dioxide, Methane, Nitrous Oxide and Flourinated gases, but are normally grouped into carbon dioxide equivalent or eCO_2 because CO_2 accounts for over 99% of GHG emissions.
- GHG emissions from fuel-burning equipment (heating or generator) are calculated using emissions factors for eCO_2 produced per unit of burned fuel.
- GHG emissions from vehicles are calculated using emission factors for eCO_2 produced per gallon of gas consumed. Typically, miles driven are tracked and a miles per gallon (mpg) metric is used to convert the miles to gallons of gas consumed.
- Because Scope 1 emissions come directly from sources the organization owns or controls, the organization has greater opportunities to reduce them. For example, the organization can use cleaner fuels, upgrade their equipment or vehicles, or reduce run times when appropriate.

Benefits

- **Cost benefits:** A reduction in Scope 1 emissions also reduces the consumption of fuel that creates emissions. A reduction in natural gas, fuel oil, diesel, propane and any other heating or generator fuel lowers the utility budget. A reduction in miles driven or the use of more fuel-efficient vehicles saves money at the gas pump.

- **Environmental benefits:** GHGs are linked to climate change. As these emissions collect in the atmosphere, the climate can be altered because the sun's rays are captured at a higher rate. The Paris Agreement focuses on avoiding a 1.5 C rise in temperature. Impacts of this global temperature rise could include rising sea levels, difficult agricultural environments, additional flooding and tropical storms, and more. A reduction in GHGs slows the rate of temperature increase and gives us additional time to continue to make breakthroughs in carbon capture and mitigation strategies.

- **Health and safety benefits:** GHGs in the atmosphere decrease air quality and increase the chances of smog and air pollution. Increased CO_2 levels contribute to respiratory issues in the local community. It is imperative for hospitals to do their part to reduce this potential impact in their local community.

Purchasing Considerations

A great place to start is by tracking Scope 1 emissions with basic spreadsheet software (e.g., Microsoft Excel). As the organization has more complex sources of emissions or is looking for more public reporting, consider using a third party to track and validate emissions.

How-To

1. Engage all stakeholders. This could include the C-suite, facilities staff, finance and/or third-party consultants.

2. Establish a goal for Scope 1 emissions tracking. If this is for internal reporting only, a simpler approach could be conducted by organization staff. If the goal is for external reporting and/or submitting to an agency like Carbon Disclosure Project, consider a more robust approach with third-party validation.

3. Create a timeline for your reporting. Typically this is the calendar year, but consider what an appropriate baseline year would be for future comparison.

4. Create an inventory of all Scope 1 sources. This will include any HVAC equipment that burns fuel on-site, any power generators that burn fuel such as diesel on-site and any organization-owned vehicles.

5. Track consumption metrics. For fuel, utility bills or fuel deliveries are a great way to obtain detailed information on fuel consumption. For vehicles, track miles traveled and use an appropriate mpg factor to convert to gallons of fuel consumed.

6. Convert the consumption metrics to equivalent CO_2 using emission factors. These numbers are typically shown in metric tons of eCO_2.

7. Report these numbers internally or externally. Consider goals to help accelerate emission reductions.

Energy Conservation Measures Synergies

- Greenhouse Gas Emissions – Scope 2
- Greenhouse Gas Emissions – Scope 3

Regulations, Codes and Standards, Policies

WRI has provided the Greenhouse Gas Protocol, which is the accepted standard on GHG emission accounting.

Resources

- The EPA climate website for items such as emissions factors, calculators, help with target setting and more.
- The EPA's detailed guidance on calculating and reporting different Scope 1 and 2 emissions.
- An article from *National Geographic* highlighting concerns over increased GHG emissions and potential impacts in the future.

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