



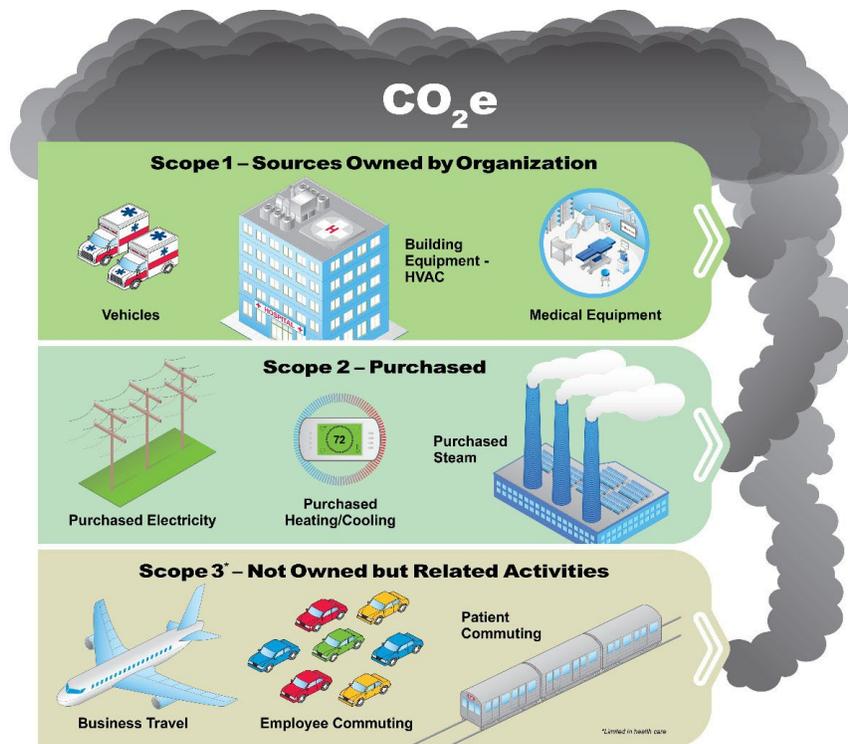
Greater efficiency supports patient care.

## Greenhouse Gas Emissions – Scope 2

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### Description

Scope 2 category greenhouse gas (GHG) emissions are indirect emissions from purchased energy that generates them off-site. The most common Scope 2 emissions come from electricity created off-site and provided to the facility through the electric grid. Other Scope 2 emissions could include steam, chilled water cooling, and other heating or cooling methods that are created at a central plant and fed to the building.



## **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<sub>2</sub> because CO<sub>2</sub> accounts for over 99% of GHG emissions.
- GHG emissions from electricity are calculated using emissions factors for eCO<sub>2</sub> produced per unit of kWh consumed. These emissions factors vary by area based on the fuel mix creating electricity. Best practice indicates obtaining these emissions factors from the electricity source or supplier. Where this is not feasible, state averages can be used to provide a reasonable accounting of emissions.
- GHG emissions in Scope 2 can be offset by purchasing green power in order to provide a renewable mix to the generation. This green power mix adjusts the emissions factors, reducing emissions generated from each kWh consumed.
- GHG emissions from steam, central chilled water, or other heating and cooling central plants are calculated by utilizing common emission factors per unit.
- Because Scope 2 emissions are indirect emissions from purchased energy, the organization can reduce them by using less energy or purchasing cleaner energy.

## **Benefits**

- **Cost benefits:** A reduction in electricity, steam, chilled water or other purchased energy lowers the utility budget. This is inherent in Scope 2 emissions as they are specifically purchased energy, so a reduction in emissions directly correlates to a reduction in spend.
- **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 trying to avoid 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. Additionally, reducing electricity use makes more electricity available for a world transitioning to more electrification and renewable options.
- **Health and safety benefits (satisfaction and quality):** GHGs in the atmosphere lower air quality and increase the chances of smog and air pollution. Increased CO<sub>2</sub> levels contribute to respiratory issues in communities across the country. It is imperative for hospitals to do their part to mitigate this potential impact on 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 C-suite, facilities staff, finance and/or third-party consultants.
2. Establish a goal for Scope 2 emissions tracking. If this is for internal reporting only, a simple 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 2 sources. For many locations, this will be electricity used from the grid. For other facilities, this will include steam, chilled water, or other heating and cooling energy purchased from a central plant.
5. Track consumption metrics. For electricity, utility bills are a great way to obtain detailed information on consumption. For steam, chilled water, and other heating and cooling energy, this may be a utility bill or a submeter that tracks energy use.
6. Convert the tracked consumption metrics to equivalent CO<sub>2</sub> using appropriate electric emission factors. These numbers are typically shown in metric tons of eCO<sub>2</sub>. If source or supplier emission factors are not readily available, state emission factors can be used.
7. Report these numbers internally or externally. Consider goals to help accelerate emission reductions.

## **Energy Conservation Measures Synergies**

- Greenhouse Gas Emissions – Scope 1
- 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.
- [Greenhouse Gas Protocol for Scope 2 Guidance](#)

## 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.
- [U.S. Energy Information Administration article](#) suggesting renewables share of U.S. electricity generation mix will double by 2050 (42%).

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