Carbon Accounting

Measuring and reporting GHG emissions supports sustainable business action.

While many sources produce greenhouse gases (GHGs), commercial and industrial sources are responsible for the majority of emissions worldwide.

As governments and leaders from public and private organizations focus on solidified GHG reduction agreements, businesses are expected to take action to reduce their carbon footprint. The pressure comes from many directions:

- industry competition
- regulatory requirements
- customer expectations
- corporate investors
- environmental groups

Carbon accounting is a systematic process for identifying, sorting and reporting a business's GHG-producing activities. It helps organizations establish a baseline for comparing their performance to industry standards, set goals and track achievement.

Call us to discuss your carbon reduction goals:

☎ *866.476.9378*

DEFINING AND MEASURING GREENHOUSE GAS EMISSIONS

Globally, carbon dioxide (CO2) is the primary GHG released into the atmosphere. Electricity generation is the principal CO2 producer worldwide and represents 40 percent of total GHG emissions.

The Greenhouse Gas Protocol, developed by World Resources Institute (WRI), categorizes emissions as Scope 1, 2 and 3. The process defines where GHG emissions originate, prevents "double counting" and clarifies appropriate mitigation strategies for each scope.

1 SCOPE 1

Direct GHG emissions, such as those from combustion in boilers, furnaces or vehicles owned by an organization; for example, on-site energy generation.

2 SCOPE 2

GHG emissions that occur at a generation facility and are consumed by another organization; for example, purchased electricity.

3 SCOPE 3

GHG emissions that are a consequence of an organization's activities, but occur from sources not owned or controlled by the organization; for example, purchased goods production or commercial air travel.

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New Guidelines for Scope 2 Purchased Electricity Emissions

In 2015 WRI released new guidance that established two methods for corporations to calculate and report Scope 2 emissions from purchased electricity: location-based and market-based. Both methods are required for reporting in the U.S., however institutions may choose one of the two methods for corporate goal setting and public reporting.

SCOPE 2 METHODS

Location-based method

This method can apply in all locations and employs a formula that multiplies megawatt-hours consumed by the grid's average emission factors to calculate the carbon footprint, represented in pounds of CO2 per megawatt hour (MWh x emission factor (lbs/MWh) = lbs CO2). These emissions factors:

+ Are calculated using the average emissions intensity of the grid where energy consumption occurs. If this is not available, a national emissions average[1] may be used.
+ Can only be reduced by decreasing electricity consumption.

Market-based method

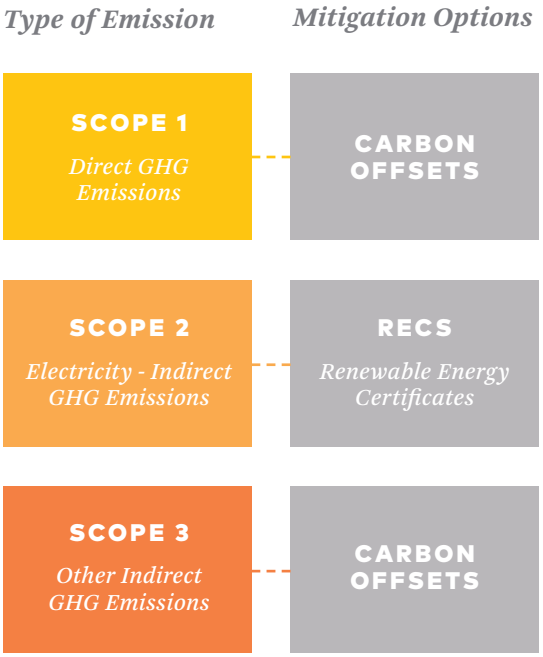
When a grid supports renewable energy options, as with every grid in the U.S., the market-based method is required. It reflects the emissions from the electricity that a company is purchasing. This method:

+ Matches renewable energy certificates (RECs) from zero-emission sources, such as wind or solar, to actual megawatt-hour usage, resulting in zero reportable emissions.
+ Requires that the reporting organization owns the REC and specifies how it was obtained—through a power purchase agreement (PPA), unbundled REC purchase or supplier-specific emission rate or program[2].

3DEGREES: PARTNERS IN SUSTAINABILITY

Carbon accounting is the first step in mitigating corporate emissions. 3Degrees provides experience and agility to assist organizations anywhere along their renewable energy journey. We can help you:

+ Conduct a GHG inventory based on current standards.
+ Develop goals and strategies to reduce your carbon footprint.
+ Source high-quality carbon offsets for Scopes 1 and 3.
+ Procure renewable energy through on- or off-site PPAs or unbundled REC purchases for Scope 2.



ADDITIONAL SCOPE 2 RESOURCES

For assistance with defining and calculating the new standards:

WORLD RESOURCES INSTITUTE

For assistance with reporting the new standards:

CDP
DRIVING SUSTAINABLE ECONOMIES

The Climate Registry

For assistance with clear messaging that aligns with Green-e and WRI standards:

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[1]*www.epa.gov/energy/egrid,* [2]*http://www.ghgprotocol.org/node/463*