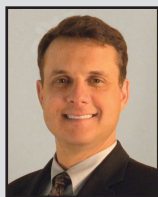


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Commercial R.E. professionals can reap numerous rewards by commissioning a carbon footprint study

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Green buildings practices are one of the hottest trends in commercial real estate today. It's easy to see why: Improving a building's environmental performance can have economic, environmental, and social benefits. While environmental science is complex, commercial real estate professionals who have a handle on the basics will be better positioned to take advantage of opportunities to go green. Here's what you need to know about carbon footprinting.

Carbon Basics

When most people hear the word carbon, they typically picture soot or coal. When the word is part of the term "carbon footprint," however, it actually refers to CO₂, a colorless, odorless gas generated primarily as a byproduct of the combustion of fossil fuels.

A building's carbon footprint refers to the total amount of greenhouse gas (GHG) emissions it generates. Greenhouse gas emissions are thought to be a major cause of global warming. Although CO₂ is the primary GHG, there are six, expressed in units of CO₂ equivalent (CO₂e). For GHG emissions

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reporting purposes, a building will generate a quantity of CO₂e from sources such as electric usage (the coal, oil, or gas used to generate the electricity), fuel oil for heating purposes, gasoline and diesel fuels, propane, and air conditioning refrigerants. CO₂e is measured in units of metric tonnes and is written as MTCO₂e. For comparison purposes, one MTCO₂e is equivalent to the GHG emissions that result from burning about 100 gallons of gasoline.

Determining a

Building's Carbon Footprint

The first step in determining a building's carbon footprint is to use a recognized protocol, such as The Climate Registry's General Reporting Protocol (GRP), to determine GHG emissions. Factors such as a building's use, tenancy, electric metering, HVAC system(s), and the ancillary combustion that occurs on-site will help determine its footprint.

Next, utility and fuel invoices will be analyzed, the building will be surveyed, data about HVAC equipment will be collected, and

building operation personnel will be interviewed. With most buildings, especially those located in minimal or non-heating zones, the single largest source of GHG emissions comes from electrical use.

The final report, often called a GHG Emissions Study, will contain an analysis of the quantity of GHG emissions, their sources, and a metric comparison to similar buildings. Usually, such a study is viewed as a starting point—an initial benchmark upon which future studies can be compared.

Cost

The cost of a carbon footprint study depends upon the scope, tenancy, and use of the building, but clients can expect a report for a 50,000 SFG office building to cost between \$3,500 and \$4,500. An independently electrically metered 200-unit apartment building or cooperative building should be in the same ballpark.

Why Commission a GHG Study?

Calculating a building's carbon footprint is voluntary for just about all residential and commercial-use

buildings, but there are many reasons to commission a study. Various entities use them to:

- Lead by example by providing a commonly perceived societal benefit;
- Comply with corporate directives;
- Position a product, service, company, or institution as green or sustainable;
- Reap marketing and branding benefits;
- Compete with peers and competitors;
- Increase operational efficiency;
- Reduce energy consumption;
- Increase energy efficiency;
- Implement cost-effective processes and systems;
- Create internal benchmarks for a carbon management program, and
- Create the perception that the building or company is on the cutting edge.

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