

# The Green Initiative Committee Carbon Footprint Calculator for Legal Service Organizations

by Douglas A. McWilliams

Businesses all over the world are examining their impact on the environment. One metric used to gauge that impact is the “carbon footprint” calculation, which measures contributions of greenhouse gases per unit of production. The CMBA’s Green Initiative Committee has assembled this guide to assist members interested in calculating their carbon footprints.

Motivations for calculating carbon footprints vary. A carbon footprint can be used to establish a baseline level of greenhouse gas emissions and a metric for quantifying the climate change benefit of efforts to reduce electricity consumption, paper use, commuter miles, etc. Others are motivated by their clients. Clients committed to a comprehensive carbon footprint seek to include the carbon emissions attributed to the materials and services they consume, including legal services. Legal service providers and other suppliers are being asked by these carbon-conscious clients to report greenhouse gas emissions per unit of service supplied. Clients committed to reducing their carbon footprint over time expect the same trends to be reflected in the periodic reports of their suppliers.

CMBA members with experience responding to such client requests assembled a guide as a starting point and a framework for legal service providers to calculate a carbon footprint. This guide is available from the CMBA Green Initiative Committee. Comments and suggestions for improvements are welcomed and may be directed to our Subcommittee Chair, Squire Sanders’ Douglas McWilliams at [dmcwilliams@ssd.com](mailto:dmcwilliams@ssd.com).

The carbon footprint calculation for legal service providers has three primary components: (1) electricity and heat; (2) transportation; and (3)

paper and raw materials. If establishing a baseline for firm use, the carbon footprint can be expressed in tons of carbon dioxide (CO<sub>2</sub>). Client-driven carbon footprint calculations are ultimately distilled to the CO<sub>2</sub> emissions per hour of legal service billed because clients are interested in the carbon emissions associated with the legal services they consume. Client-driven calculations may exclude activities not directly related to the provision of legal services (e.g., commuting). By contrast, baseline carbon footprint calculations would include commuting to ensure that promoting greener ways to work generate measured improvements.

## Electricity and Heat

Electricity consumption is the primary source of carbon emissions for many law offices in Northeast Ohio.

**STEP ONE** – Quantify electricity consumption for the previous 12 months in kilowatt hours using your monthly utility bill.

**STEP TWO** – Apply a carbon emission factor to convert the amount of electricity consumed to the amount of metric tons of carbon dioxide emitted by the generation of that electricity. There are a number of sources for emission factors. For example, 0.00057 metric tons CO<sub>2</sub>/kilowatt hour is the North America factor from the global carbon calculator for electricity generation at [www.carbonneutral.com](http://www.carbonneutral.com).

**STEP THREE** – Calculate the CO<sub>2</sub> emissions from electricity consumption. Multiply annual electricity consumption (kW-hr/yr) from STEP ONE by 0.00057 metric tons CO<sub>2</sub>/kW-hr from STEP TWO to determine metric tons of CO<sub>2</sub>

emitted per year from electricity consumption.

If heating and cooling are generated using electricity, no further calculation is required for this component. If natural gas or other fossil fuels are burned for heating or cooling, then their carbon contribution should also be quantified using one of the emission factors below.

Type of Fuel	Units of Measurement	CO <sub>2</sub> Emission Factor
Natural Gas	Thousand cubic feet (MCF)	0.0002 tons of CO <sub>2</sub> /MCF
Fuel Oil	gallon	.0134 tons of CO <sub>2</sub> /gallon

## Transportation

Carbon emissions from transportation related to the provision of legal services can be complicated. Air travel miles booked through a common agent can be used as a simple surrogate for total business transportation based on the premise that non-client air travel offsets client-related travel in other modes. Annual air travel miles can be inserted into the carbon calculator for air travel at [www.carbonneutral.com/business-carbon-calculator](http://www.carbonneutral.com/business-carbon-calculator) to estimate the carbon emissions associated with business transportation.

The transportation component also may include the carbon contributions of courier services, taxis, etc. The website above can assist in calculating CO<sub>2</sub> emissions from each of these activities.

Transportation also may include commuting miles, particularly if using the carbon footprint

calculation to establish baseline emissions measuring progress. Programs that encourage rideshares, public transportation or other “greener” ways to work can be effectively measured by converting commuter miles to carbon emissions using a carbon calculator. Note, however, that this calculation requires records of commuter behavior that are not typically kept in the ordinary course of business.

#### **Paper and Other Raw Materials**

Paper is the most significant raw material used to supply legal services in most law offices. The American Bar Association (ABA) reports that about nine tons of CO<sub>2</sub> equivalent gases are released during the life cycle of each ton of paper. In addition to reducing paper usage, the carbon footprint contribution can be reduced by purchasing paper from companies with certified sustainable forestry initiative (SFI) practices. Replanting where trees are harvested ensures that

carbon dioxide is being fixed in new growth trees. SFI certified companies also minimize methane, a highly potent greenhouse gas, by reducing the amount of wood degrading on the forest floor. With a robust paper recycling program and a SFI certified paper supplier, some sources estimate that the carbon footprint contribution can be reduced to one ton or less of CO<sub>2</sub> emissions per ton of paper produced. The ABA Section of Environment, Energy and Resources website offers many ideas for reducing paper consumption for law offices.

See <http://www.abanet.org/enviro/ climatechallenge/wastewise.html>

#### **What's Next?**

The carbon footprint of a legal service provider is the sum of the total CO<sub>2</sub> emissions from each of these three components. Whether generating this information for a client or for internal use, the value of this exercise comes from tracking the

size of the carbon footprint and how it changes in response to actions taken. For those interested, websites offer opportunities to purchase carbon offsets to neutralize the effect of a carbon footprint ([www.carbonfund.org](http://www.carbonfund.org)) or to plant trees sufficient to offset the carbon emissions in your footprint ([www.carbonify.com](http://www.carbonify.com)).

For additional information on carbon footprints, see the following websites:

[www.carbonneutral.com](http://www.carbonneutral.com)  
[www.carbonify.com](http://www.carbonify.com)  
[www.carbonfund.org](http://www.carbonfund.org)  
[www.carbonfootprint.com](http://www.carbonfootprint.com)  
[www.begreennow.com](http://www.begreennow.com)  
[www.climatetrust.org](http://www.climatetrust.org) ➔

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