

CLEVELAND METROPOLITAN BAR ASSOCIATION

Cleveland Metropolitan Bar Association Green Initiatives Committee Carbon Footprint Calculator for Legal Service Organizations

Businesses and individuals 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 or time. Law practices and other service providers pose some interesting challenges for estimating a carbon footprint. CMBA’s Green Initiatives Committee has assembled this guide to assist members interested in calculating their carbon footprints.

Motivations for calculating carbon footprints vary. Some will use this calculation as a tool to establish a baseline level of carbon contribution and a metric for quantifying the environmental benefit of efforts to reduce electricity consumption, paper use, etc. Others are motivated by their clients. Legal service providers, like other suppliers, are being asked by carbon-conscious clients to estimate their carbon emissions per unit of production. These clients have committed to include all of their suppliers in a comprehensive estimate of their carbon emitted per unit of production, and some have included legal service suppliers in the calculations. The clients ask suppliers to commit to track and periodically update the carbon footprint calculation and some will not

pay invoices until the information is properly provided.

CMBA members with experience responding to such client demands assembled this guide as a starting point and a framework for calculating carbon footprints for legal service providers. This guide also identifies websites that offer interactive tools for those interested in more information on carbon footprint calculations. Comments and suggestions for improvements are welcomed and may be directed to our Subcommittee Chair, Doug McWilliams at dmcwilliams@ssd.com.

The carbon footprint calculation for legal service providers has three components: (1) electricity and heat; (2) business transportation; and (3) paper and raw materials. Client-driven carbon footprint calculations are ultimately distilled to the CO₂ emissions per hour of legal service or per dollar billed because clients are interested in the carbon emissions associated with the legal services they consumed. It is appropriate, for these calculations, to exclude activities not directly related to the provision of legal services (e.g., commuting).

1) 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. For those who receive a monthly electric bill, the kilowatt hours of electricity consumed is on that monthly statement. If utilities are included in the monthly lease payment, the amount of electricity consumed for the space leased may need to be calculated as a proportion of the electricity used by the entire building.

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 CO2/kilowatt hour is the North America factor from the global carbon calculator for electricity generation at www.carbonneutral.com/business-carbon-calculator.

STEP THREE – Calculate the CO2 emissions from electricity consumption. Multiply annual electricity consumption (kW-hr/yr) from STEP ONE times 0.00057 metric tons CO2/kW-hr from STEP TWO to determine metric tons of CO2 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.¹

Type of Fuel	Units of Measurement	CO2 Emission Factor
Natural Gas	Thousand cubic feet (MCF)	0.0002 tons of CO2/MCF
Fuel Oil	gallon	.0134 tons of CO2/gallon

2) Business Transportation:

The second component of the carbon footprint analysis estimates GHG emissions from transportation related to the provision of legal services. Air travel miles booked through a common agent can be used as a simple surrogate for total business transportation. Annual air travel miles can be inserted into the carbon calculator for air travel at www.carbonneutral.com/business-carbon-calculator to estimate the carbon emissions associated with business transportation.

The carbon footprint analysis may also include courier services, taxis, and rail miles. The carbon neutral website can assist in calculating CO2 emissions from each of these activities. While the IRS does not consider commuter miles a business expense, there are advantages to including them in your baseline carbon footprint analysis. 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

¹ <http://www.Carbonify.com/carbon-calculator.htm>

behavior that are not typically kept in the ordinary course of business.

3) 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 CO₂ equivalent gases are released during the life cycle of each ton of paper. These calculations do not take account of the carbon sinks created by the certified sustainable forestry initiative (SFI) practices employed by many paper suppliers. By reforestation for every location where trees are harvested, paper suppliers engage in sustainable forestry practices that ensure carbon dioxide is being fixed in new growth trees. SFI also ensures that trees are efficiently harvested so they do not degrade on the forest floor and generate methane, a highly potent greenhouse gas. Other sources estimate that the true life cycle contributions of paper manufactured by a certified SFI supplier (look for the label on the packaging of each ream of paper) is closer to one ton of CO₂ emissions per ton of paper produced, which is a simple calculation for the carbon footprint contribution from this component. The ABA

Section of Environment, Energy, and Resources website offers many ideas for reducing paper consumption for law offices. See <http://www.abanet.org/environ/climatechallenge/wastewise.html>

WHAT'S NEXT?

The carbon footprint of a legal service provider is the sum of the total CO₂ emissions from each of these three components. It is typically expressed in tons of CO₂ per year. Many websites also offer opportunities to purchase carbon offsets to neutralize the effect of a carbon footprint. See, e.g., www.carbonfund.org. One website can even calculate the number of trees that would need to be planted to offset the carbon emissions in your footprint. See www.carbonify.com.

For additional information on carbon calculators and steps you can take to reduce your carbon footprint, see the following websites: www.carbonneutral.com; www.carbonify.com; www.carbonfund.org; www.carbonfootprint.com; www.begreennow.com; www.climatetrust.org.