

# Greenhouse Gas Emissions – 2022

## Statement, Methodology & Compliance

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**COMPANY STATEMENT**

I, Maria Bothwell, CEO, Toffler Associates, certify that Toffler Associates’ 2022 Scope 1 and Scope 2 greenhouse gas (GHG) emissions were calculated in accordance with the [GHG Protocol Corporate Accounting and Reporting Standard](#). 2022 GHG emissions are listed in the following Tables. Previous years’ data is not available currently.

**GHG REPORTS**

**Table 1: GHG Report Summary for 2022**

EMISSIONS (tCO2E)	2022
<b>Scope 1 Emissions</b>	<b>0</b>
Mobile Combustion	0
Stationary Combustion	0
<b>Scope 2 Emissions</b>	<b>17.65</b>
Domestic Facility	17.65
<b>Scope 3 Emissions</b>	<b>27.82</b>
Business Travel	19.55
Hotel	3.45
Commuting	4.82
<b>Total</b>	<b>45.47</b>

**Table 2: GHG Annual Report**

SCOPE	EMISSION CATEGORY	EMISSION SOURCE	EMISSIONS (tCO2E) 2022	% OF TOTAL EMISSION
Scope 1 Emissions			0	0
	Mobile Combustion		0	0
		Diesel Fuel	0	0
		Biodiesel (100%)	0	0
		Ethanol (100%)	0	0
		Motor Gasoline	0	0
	Stationary Combustion		0	0
		Biodiesel (100%)	0	0
		Ethanol (100%)	0	0
		Motor Gasoline	0	0
		Natural Gas	0	0
Scope 2 Emissions			17.65	38.81
	Domestic Facility		17.65	38.81

	Electricity	17.65	38.81
Scope 3 Emissions		27.82	61.19
	Business Travel	19.55	43.01
	Air	19.55	43.01
	Land Transportation	0	0
	Hotel	3.45	7.58
	US-based	3.45	7.58
	Australia	0	0
	Belgium	0	0
	Brazil	0	0
	Canada	0	0
	Chile	0	0
	China	0	0
	Colombia	0	0
	Costa Rica	0	0
	Egypt	0	0
	France	0	0
	Germany	0	0
	Hong Kong, China	0	0
	India	0	0
	Indonesia	0	0
	Italy	0	0
	Japan	0	0
	Jordan	0	0
	Korea	0	0
	Malaysia	0	0
	Maldives	0	0
	Mexico	0	0
	Netherlands	0	0
	Oman	0	0
	Philippines	0	0
	Portugal	0	0
	Qatar	0	0
	Russian Federation	0	0

	Saudi Arabia	0	0
	Singapore	0	0
	South Africa	0	0
	Spain	0	0
	Switzerland	0	0
	Thailand	0	0
	Turkey	0	0
	United Arab Emirates	0	0
	Vietnam	0	0
	UK	0	0
	UK (London)	0	0
	Commuting	4.82	10.6
	Passenger Cars	4.5	9.9
	Light-Duty Trucks	0	0
	Motorcycles	0	0
	Transit Rail	0.32	0.7
	Buses	0	0
<b>Total</b>		<b>45.47</b>	<b>100</b>

## METHODOLOGY

Toffler Associates conformed to the following methodology to estimate our Scope 1, 2, and 3 emissions.

### Scope 1: Fleet Vehicles and Generators

Our company does not maintain fleet vehicles or generators. If we did, we would use vehicle make, model, and mileage data provided by our corporate office staff associated with each vehicle to calculate emissions. We would convert the reported data into CO<sub>2</sub>e emissions using GHG Protocol's tool for calculating emissions from mobile sources. Emissions in the calculation would include CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, and the emissions factors and global warming potential values used were from the EPA GHG Emission Factors from [Emission Factors for Greenhouse Gas Inventories \(www.epa.gov\)](https://www.epa.gov/emission-factors-for-greenhouse-gas-inventories).<sup>1</sup>

### Scope 2: Facilities

Toffler Associates occupies approximately 3,547 square feet of leased office space. Consequently, all facilities' emissions fall within Scope 2. We used data from

<sup>1</sup> [https://www.epa.gov/system/files/documents/2022-04/ghg\\_emission\\_factors\\_hub.pdf](https://www.epa.gov/system/files/documents/2022-04/ghg_emission_factors_hub.pdf)

company and individual utility bills to calculate the average kilowatt hours (kWh) of electricity used within these facilities.

After determining kWh consumption, we used the GHG emissions factors from the U.S. Environmental Protection Agency's (EPA) eGRID202 to calculate each building's emissions (differentiated by region). The formula we used to calculate emissions is: GHG emissions = Electricity consumed (in MWh) x EPA regional GHG emissions factor. We converted nitrogen dioxide and methane emissions to CO<sub>2</sub>e using global warming potentials from the EPA GHG Emission Factors from [Emission Factors for Greenhouse Gas Inventories \(www.epa.gov\)](http://www.epa.gov). Emissions in the calculation include CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.

### Scope 3: Business Travel and Commuting

Our calculations include estimated emissions from employee business travel, which we define as work-related air travel, car rentals, billable personal miles, and hotel stays. These estimates were provided by our travel providers, who work closely with us to track the environmental impact of each trip. We also estimate emissions associated with employees' commutes to and from work. All business travel and commuting emissions are Scope 3. Emissions in the calculations include CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.

#### AIR TRAVEL

GHG Protocol emissions factors were used to estimate CO<sub>2</sub> emissions associated with all domestic and international flights recorded by our travel service providers. Flights were differentiated by length (long-, medium-, and short-haul), mileage, seat class, and type of aircraft. Factors and calculations for conversion are for global data.

#### HOTELS

For hotel reservations we record the number of room nights occupied by each employee. DEFRA Conversion Factors 2022 Hotel Stays for Company Reporting to convert the number of room nights per country to estimated CO<sub>2</sub>e emissions.

#### AUTOMOBILE

We converted reported automobile mileage (rental and personal vehicles) into CO<sub>2</sub>e emissions using GHG Protocol's tool for calculating CO<sub>2</sub> emissions from mobile sources. The emissions factors and global warming potential values used are from the EPA GHG Emission Factors from [Emission Factors for Greenhouse Gas Inventories \(www.epa.gov\)](http://www.epa.gov).

#### EMPLOYEE COMMUTING

Each year, we estimate miles commuted by each employee by recording the distance between their home and primary office addresses. Using guidance provided by the EPA's Emission Factors for Greenhouse Gas Inventories, we converted the average daily commuting distance into annual estimates for each mode of transportation. We used the conversion factors to determine the CO<sub>2</sub>e

emissions produced for each mode, then combined them to determine an aggregate commuting footprint. The emissions factors and global warming potential values used are from the EPA GHG Emission Factors from Emission Factors for Greenhouse Gas Inventories ([www.epa.gov](http://www.epa.gov)).

A large number of our employees work from home due to changes from the COVID-19 pandemic. These employees did not record commuting miles.

## COMPLIANCE WITH THE GHG PROTOCOL CORPORATE ACCOUNTING AND REPORTING STANDARD

The GHG Protocol Corporate Accounting and Reporting Standard establishes standards and guidelines for businesses and other organizations creating a corporate-level GHG emissions inventory. The standard covers the accounting and reporting of seven greenhouse gasses covered by the Kyoto Protocol – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulfur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>).

In this current report, the calculations are based on the GHG Protocol Corporate Accounting and Reporting Standard and its latest GHG Emission factors. Our report summarizes emissions from three of the most important gases: CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O.

The three reporting scopes are understood and defined as emissions from:

- **SCOPE 1** - Company-owned fleet vehicles and generators.
- **SCOPE 2** - Electricity purchased from utility providers.
- **SCOPE 3** - Business travel, hotel nights, and employee commuting

To create this report and its summary figures, we used the following protocol:

1. **Identify** GHG emissions sources,
2. **Select** a GHG emissions calculation approach,
3. **Collect** activity data and choose emission factors,
4. **Apply** calculation formulas,
5. **Summarize** GHG emissions data at the corporate level.

In the reporting statement provided, common guidance on reporting to the corporate level was followed including:

- Brief description of the emission sources,
- List with a comparison of previous years where provided,
- Reporting period covered,
- Trends evident in the data.

SIGNATURE

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**Maria Bothwell, CEO, Toffler Associates**