# Environmental Protection Agency Carbon Footprint Calculator



# SAMPLE ONLY

This tutorial and spreadsheet will enable you to calculate and document the emissions and carbon footprint of an organization using recognized GHG accounting standards.



Version Control

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## **Calculating Emissions**

In order to effectively calculate emissions we should have knowledge of:

- the GHG accounting standard or protocol with information on the sector, sources, and processes that it covers;
- the approaches needed for determining CO2e e.g., direct measurement, vehicle mileage, etc.;
- collecting activity data and selecting their appropriate emission factors;
- the likely emissions sources and the scopes they fall under;
- other information such as quality control practices.



Calculations are based on the data available for different business activities. Most actions and decisions a company makes can cause carbon. A more comprehensive and exact data collection will provide a more accurate calculation.

#### **Using the Carbon Calculator Spreadsheet**

There are different calculation tools available and you can choose one that suits your organization. The one covered in this tutorial is based on the GHG emission estimates from the United States Environmental Protection Authority (EPA). It is designed to be a simplified calculation tool to help organizations estimate and inventory their annual greenhouse gas (GHG) emissions.

The calculator will determine the direct and indirect emissions from all sources at a company when activity data are entered into the various sections of the workbook for one annual period.



Download the EPA calculator spreadsheet by clicking here.

https://www.climatechange.org.au/pdf/EPA\_GHG.xlsm

The calculator is an Excel workbook separated into the following sections:

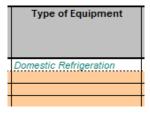
- Introduction to the Calculator
- Boundary Questions
- Summary of Organization's Emissions
- Data entry and calculation for scope 1 emission sources Stationary Combustion, Mobile
   Sources, Refrigeration and Air Conditioning Leakage, Fire Suppression Systems, Purchased Gases
   and Waste Gases
- Data entry and calculation for scope 2 emissions sources Purchases of Electricity, Purchases of Steam or Heat
- Data entry and calculation for scope 3 emissions sources Employee Business Travel, Employee
   Commuting, Product Transport, Waste
- Purchased Offsets
- Unit Conversions
- Heat Content
- Emission Factors
- Help Sheets

Once you have downloaded the spreadsheet, you can then open it and begin entering your data.

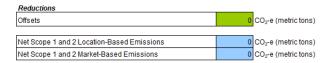


Click on Enable macros – you may get an error message saying that some links can't be updated which you can disregard.

Data collected by the organization for each emission source can be entered into the orange boxes within the Calculator.



Blue and green summary boxes represent the scope 1 & 2 and scope 3 portions of the organization GHG inventory, respectively.

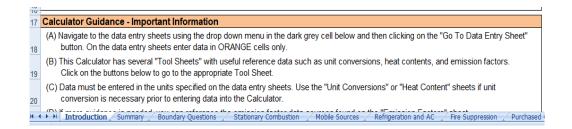


#### Click on the Summary tab and fill in your company details

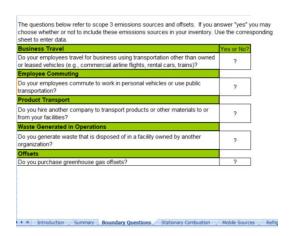
Totals are calculated in metric tons of CO2 equivalent (CO2e) on the Summary sheet tab.

When entering data, pay attention to units (e.g., cubic feet, gallons). The units from the data collected must match the units in the Calculator for that data requirement. You can readily convert from metric.

For some sources, the Calculator provides several options for calculating emissions, based on data availability. Make sure to read the instructions at the top of each section in the Calculator before entering the data. Remember to enter data covering a full year.



Click on the Introduction Tab on the bottom L/H side of the screen and read the notes.



Click on the Boundary Tab and answer the questions relating to operational boundaries.

#### **Scope 1 Direct Emissions**

These occur from sources that are owned or controlled by the organization. Examples include boilers used to heat buildings, refrigerant leakage from air conditioners, or travel in a fleet vehicle. Scope 1 sources may also include leased vehicles or equipment for which the organization pays the fuel bills or can access the fuel use data. Within the Calculator, sources are categorized into six types of scope 1 sources: stationary combustion, mobile sources, refrigeration and air conditioning equipment, fire suppression equipment, purchased gases, and waste gases. While most companies will have at least some scope 1 emission sources, it is possible for an office-based organization to have few or none.

#### **Stationary Combustion**

Combustion emission sources are stationary sources that combust fuel, like a natural gas hot water heater for an office building or an oil burning boiler. Emissions result from the actual combustion of the fuels to produce useful products, like heat and hot water.

uidance					
entry is a	nual data for each combustion unit, shown in first row (GREEN Italics of "Fuel Combusted" from drop dow	)	) in ORANGE cells on Table	1. Example	
the "U (B) if fuel is for comp (C) Biomass	r "Quantity Combusted" and choose sary to convert units, common hea int Conversion" sheet. consumed in a facility but stationary letteriess. See the "tems to Note" is CO <sub>2</sub> emissions are not reported in	t contents can be found on y fuel consumption data are section of the Help sheet for the total emissions, but are	the "Heat Content" sheet and not available, an estimate sh suppested estimation appro-	d unit conversions on could be made aches.	
Source ID	ionary Source Fuel Combustion Source Description	Source Area (sq ft)	Fuel Combusted	Quantity Combusted	Unite
A-012 fir		12.517.		10,000	
			3		

Click on the Stationary Combustion Tab.

Many businesses will not have to fill this section. If you use gas to heat your premises you should be able to get the amount of gas in MMBtu units from your bill, otherwise you can use other unit.

To account for these sources, collect information about the type of fuel used and the quantity of fuel combusted at each facility. Sources of data can vary, but the data are often provided by the utility company that supplies the fuel to the organization. A monthly natural gas bill, for example, can be used to provide information regarding how much natural gas was purchased for the previous billing cycle.

Enter the data into the appropriate orange colored boxes of the Calculator section titled Stationary Combustion. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored box.

#### **Mobile Source Emissions**

Mobile sources, like organization-owned cars and heavy-duty vehicles, generate emissions by burning fuel. The fuel usage for any vehicle that is included within the organization's selected boundary approach should be reported in this section as direct emissions.

Miles
3.63
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Click on the Mobile Sources tab.

Obite and Beater Birent		Year
Ships and Boats - Diesel		1990
Ships and Boats - Gasoline (2 stroke)	T	
Passenger Cars - Gasoline	$\wedge$	
Light-Duty Trucks - Diesel		
Medium- and Heavy-Duty Vehicles - Diesel		
Light-Duty Cars - Methanol	~	
	_	
	Ships and Boats - Gasoline (2 stroke) Passenger Cats: Gasoline Light-Duty Trucks - Gasoline Heavy-Duty Vehioles - Gasoline Motorogoles - Gasoline Passenger Cats - Diesel Light-Duty Trucks - Diesel	Ships and Boats - Gasoline (2 stroke)  Passenger Cars - Gasoline

❖ You have to type in the value 'OnRoad' or 'NonRoad' for the calculation to work

Determine the types of vehicles, types and amount of fuel, and the miles driven for each vehicle or vehicle type. Data sources vary, but fuel usage is often determined from fuel receipts or purchase records, and mileage can be determined from vehicle records. Mileage or fuel use can also be estimated based on vehicle fuel economy from the manufacturer or www.fueleconomy.gov if the other data sources are not readily available.

Enter the data into the appropriate orange colored boxes of the Calculator section titled Mobile Sources. If the organization owns or leases biofuel or ethanol vehicles, the percentage of biologically-based fuel should be entered into the boxes provided; default values are available if needed. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored box.

#### Refrigeration and Air Conditioning Leakage

Refrigeration and Air Conditioning (AC) Equipment sources can vary in size based on the type of organization. They are often small sources for office-based organizations.

Most businesses will not use this tab. If you are running air-conditioning, then the emissions are accounted for through your electricity account.

# Refrigeration and AC

Emissions from refrigeration and AC devices in facilities or vehicles are caused by the leakage of chemicals with global warming impact during use, maintenance, and/or disposal of the device. For example, a small office building may have one rooftop air conditioning unit while a grocery store chain may have several rooftop air conditioning units per store as well as a multitude of other refrigeration equipment.

Choose one of three different calculation methods available in the Refrigeration and AC section of the Calculator. The types of refrigerants along with the data needs for each method are listed in the Calculator. Data for these sources are often collected from maintenance and inspection records, work orders, or invoices from contractors that service this equipment.

Refrigerants not included on the list may be chemicals that do not need to be included in the inventory. For example, ozone depleting substances, such as chlorofluorocarbons (CFCs) or Freon and hydrochlorofluorocarbons (HCFCs), are regulated internationally and are typically excluded from a GHG inventory or reported as a memo item.

Enter the data into the appropriate orange colored boxes of the Calculator section titled Refrigeration and AC. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored box.

#### **Fire Suppression Systems**

Fire Suppression emission sources can range in scale from a small portable fire extinguisher to a large-scale fire suppression system for an office building or warehouse. The emissions are caused by chemicals (e.g., HFCs, CO2) emitted from fire suppression devices during use, maintenance, and disposal.

Fire Suppression 🛴

Choose one of three different calculation methods available in the Fire Suppression section of the Calculator. In each method, choose the types of fire suppression gases used and then gather the corresponding emissions data. Data for these sources are often collected from maintenance and inspection records, work orders, or invoices from contractors that service this equipment.

Enter the data into the appropriate orange colored boxes of the Calculator section titled Fire Suppression. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored box.

#### **Purchased Gases**

Industrial gases are sometimes used in processes such as manufacturing, testing, or laboratory uses. For example, CO2 gas is often used in welding operations.

Purchased Gases 🔏

These gases are typically released to the atmosphere after use. Any releases of the seven major greenhouse gases (CO2, CH4, N2O, PFCs, HFCs, SF6, and NF3) must be included in the GHG inventory. Ozone depleting substances, such as CFCs and HCFCs, are regulated internationally and are typically excluded from a GHG inventory or reported as a memo item.

Determine if CO2, CH4, N2O, PFCs, HFCs, SF6, and NF3 are used in processes such as those mentioned above. If so, collect the mass of gas purchased. If data are not available in mass units, the user may need to convert from volume to mass using the density of the specific gas.

Enter the data into the appropriate orange colored boxes of the Calculator section titled Purchased Gases. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored box.

#### **Waste Gases**

Some operations, such as printing operations or paint booths, emit organic compounds. In some cases, these waste gas streams are combusted with a flare or thermal oxidizer. This combustion results in CO2 emissions that should be included in GHG inventories. These are uncommon sources for most office-based organizations.

## Waste Gases /

Collect information about the volume of waste gas that was combusted. Because of the variable composition of waste gas streams, the user will also need to find out what chemicals are present in the waste gas stream and the quantity of each chemical. Please note that oxidation factor and gas density should be also collected if practicable; however, default values can be used if needed. The oxidation factor accounts for the amount of carbon in the fuel that is converted to CO2 during combustion.

Enter the data into the appropriate orange colored boxes of the Calculator section titled Waste Gases. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored box. Scope 2 Indirect Emissions Scope 2 indirect emissions are emissions from energy (e.g., electricity, heat, and steam) consumed in owned or controlled equipment or operations but generated by another entity other than the reporting organization.

For example, although the reporting organization may own equipment that consumes electricity, like office computers and copy machines, a power plant operated by a third-party is likely burning fuel to generate the electricity that the reporting organization is using to operate its equipment. Therefore, the indirect emissions of the reporting organization are the direct emissions of the third-party that operates the power plant. For many companies, purchased electricity is the largest source of indirect GHG emissions and the most significant opportunity to reduce those emissions.

#### **Scope 2 Emissions**

The Calculator section on scope 2 emissions has two types:

- purchases of electricity; and
- purchases of steam.

Guidance released in early 2015 requires organizations to report two scope 2 totals: location-based and market-based. This is referred to as dual reporting. The organization should quantify and report both totals in its GHG inventory.

The location-based method considers average emission factors for the electricity grids that provide electricity. The market based method considers contractual arrangements under which the organization procures power from specific sources, such as renewable energy. For contractual arrangements to be included as market-based emissions, they must meet the quality criteria outlined in the guidance document and also on the "Market-Based Method Help sheet" in the Calculator.

Market-based emission factors can be entered based on the organization's contractual arrangements and on the availability of factors. The Calculator is set up such that if no market-based factors are entered, it will calculate them as equal to location-based, based on the requirements of the scope 2 guidance. More information is available in the Greenhouse Gas Inventory Guidance document, Indirect Emissions from Purchased Electricity.

#### **Purchases of Electricity**

GHGs are emitted when fossil fuels are combusted to generate electricity. Companies account for their responsibility for these emissions by reporting them as scope 2 emissions.

If you purchase renewable energy that is less than 100% of your site's electricity, see the example in the market-based method Help sheet.					Use these cell	Market to enter applicable	-Based le market-based emiss	ion factors		Location	on-Based		
able 1. T	otal Amount of Ele	ectricity Purch	ased by eGRID Subregion		E	mission Facto	rs .	Em	issions		Emi	ssions	
Source	Source Description	Source Area (sq ft)	eGRID Subregion where electricity is consumed	Electricity Purchased (kWh)	CO <sub>2</sub> Emissions (Ib/MWh)	CH <sub>4</sub> Emissions (Ib/MWh)	N <sub>2</sub> O Emissions (lb/MWh)	CO <sub>2</sub> Emissions (lb)	CH <sub>4</sub> Emissions (lb)	N <sub>2</sub> O Emissions (lb)	CO <sub>2</sub> Emissions (lb)	CH <sub>4</sub> Emissions (Ib)	N <sub>2</sub> O Emission (lb)
ldg-012	East Power Plant	12,517	HIMS (HICC Miscellaneous)	200,000	0	0	0	0.0	0.0	0.0	237,120.0	28.6	4
aimn	Office	2,000	ERCT (ERCOT All)	300,000	0.121	0.045	0.056	36.3	13.5	16.8	260,580.0	17.1	2
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					<enter factor=""></enter>	<enter factor=""></enter>	<enter factor=""></enter>						
					center factors	center factors	center factors		Purchase	0	aste Gases   Elect		

#### Click on the Electricity Tab

You electricity bill may show the amount of CO2e that you have consumed, in which case you can skip this step and simply type in the amount in the Summary tab (you will have to temporarily un-protect the worksheet).

Electricity tartifs roly of an layer infixture tenewable and fossil and generation. So foou apply a fossil fuction factor the entire KWh amount that you purchased your emission calculations will be too high. You must get the accurate data from your electricity supplier. The location based approach, therefore, need not be used.

Collect electricity purchase information in units of kWh. It may be for each facility in the company. organization's best data source is typically its electricity bill or invoice. Data on any contractual arrangements, such as utility green power products, should also be collected. This should include the units (e.g., kWh), as well as the relevant emission factors. These purchases should be separately accounted for using the appropriate market-based emissions factor. See help sheet in the Calculator for how to enter these data.

Enter the data into the appropriate orange and yellow colored boxes of the Calculator section title Electricity (Table 1) if market-based factors are applicable. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored boxes at the bottom of the sheet.

#### **Purchases of Steam or Heat**

Similar to electricity production, GHGs are emitted when fossil fuels are combusted to generate steam or heat. If the reporting organization purchases steam or heat, the emissions are accounted for as scope 2 emissions.

Determine the amount of steam purchased, the types of fuel that the steam supplier uses to generate the steam, and either the emission factors provided by the steam supplier or the boiler efficiency. If values for boiler efficiency are unavailable, a default of 80 percent is provided in the Calculator.

Enter the data into the appropriate orange and yellow colored boxes (Table 1) of the Calculator section titled Steam. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the blue colored boxes at the bottom of the sheet.

#### **Scope 3 Indirect Sources**

Scope 3 indirect emissions are a consequence of the activities of an organization but are not owned or controlled by the organization sources, such as employee commuting and transporting products to market using contract carriers.

Some companies don't report scope 3 emission sources but estimating these emissions provides a more complete picture of the organization's climate change impact and offers the organization more opportunities to reduce emissions. For example, if employee commuting emissions are included, it may also be beneficial to report the emission reductions from implementing a telecommuting or employee carpool program. In the Calculator, sources are categorized into four types of scope 3 sources most commonly reported: employee business travel;

- employee commuting;
- · waste; and
- product transport.

#### **Employee Business Travel**

Employee business travel emissions differ from the required mobile source emission reporting in that they account for employee business travel in vehicles not owned or leased by the organization, such as taxis, trains, commercial airplanes, and personal vehicles used for sales.



Click on the Business Travel tab

Collect information about employees' business travel methods. For travelers that use a personal vehicle, choose the vehicle type from the Calculator, and collect data for the vehicle miles during the reporting period. For rail, bus, and air travel, the mode of travel should be selected from the Calculator options and an estimate of the passenger mileage data provided for each.

Enter the data into the appropriate orange colored boxes (Tables 1-3) of the Calculator section titled Business Travel. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the green colored box.

#### **Employee Commuting**

Employee commuting emissions differ from the required mobile source emission reporting in that they account for employee travel to and from work in vehicles not owned or leased by the organization, including personal vehicles, buses, and trains.

uidance				I.S. Environmental Ph	Jacob Agency	
(A) Enter	annual data in ORANG	E cells in the table corresponding to t	he transport method	Example entry	is shown in firs	t row (GREEN)
		a personal vehicle, select the "Vehic				
(C) For en	ployees commuting us	ing public transportation, select the "	Transport Type" and	d enter miles trav	reled (passenge	r-miles) in Table
ip: If more	than one employee tra	ivels by the same vehicle type or train	sport type, miles o	an be combined	and entered in	one row.
		ployee Commuting by Vehicle-N	files (CO <sub>2</sub> , CH <sub>4</sub> and			
Source ID	Source Description	Vehicle Type	Vehicle-	CO2	CH4	N <sub>2</sub> O
			Miles	Emissions	Emissions	Emissions
			(miles)	(kg)	(g)	(g)
D-001	John Doe 1	Passenger Car	100	34	0.9	0.8
dmin	Office Staff	Passenger Car	50,000	17,050	450.0	400.0
			_			

#### Click on the Commuting tab

Collect information about each employee's commuting method. For commuters that use a personal vehicle, the appropriate vehicle type should be selected from the Calculator and data collected for the vehicle miles during the reporting period. For rail, bus, and air travel, the mode of transport should be selected from the Calculator options and an estimate of the passenger mileage data provided for each.

After the data have been collected, enter the data into the appropriate orange colored boxes (Tables 1-2) of the Calculator section titled Employee Commuting. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the green colored box.

#### **Product Transport**

Emissions from product transport include product and material shipments by vehicles not owned or leased by the organization. For example, the organization could hire another company to transport product from the manufacturing location to distribution centers or final markets. (Note: if an organization owns or leases the trucks or other transport vehicles, these would be part of its scope 1 mobile source emissions.) Another example of product transport is paying a courier to transport documents from one office to another.

(B) For rail, (C) For road	inual data in ORANGE cells in the tab water, or air shipments, enter short it shipments, if your organization's pri	ton-mile data in Table 2. See Help of oduct is the only product transporte	sheet for detailed in the vehicle	is on calculati e (i.e. full truc	ng short ton-r	nles.	
(D) For road enter the ve	ype and miles for each leg of transp shipments, if your organization's pri hicle type and short ton-miles (produ-	oduct makes up only part of the truc uct weight (short tons) x distance) t	ck load (i.e. les for each leg of	s-than-load o			
: Make sur	ated using althorition-miles. See Help sheet for details on calculating too-miles.  It all disrangor legs are accounted for from manufacturing facility to distribution to customer.  On-Road Websice Product Transport by Vehicle-Miles (CO <sub>4</sub> , CH <sub>4</sub> and N <sub>2</sub> O)						
iource ID	Source Description	Vehicle Type	Vehicle- Miles (miles)	CO <sub>1</sub> Emissions (kg)	CH <sub>4</sub> Emissions (g)	N <sub>2</sub> O Emissions (g)	
5g-912	East Power Plant Finished Goods	Medium- and Heavy-duty Truck	100	141	1.3	33	
-							
_							

#### Click on the Product Transport tab

Collect information about shipment methods (on-road vehicle, waterborne craft, freight rail, or aircraft). For road shipments, the user may enter data based on vehicle mileage or ton-miles of product transported. As defined in the Calculator Product Transport Help sheet, ton-miles is calculated by multiplying the weight transported by the distance of each shipment. If the vehicle mileage option is chosen, then the organization should select the type of vehicle and enter the total mileage for that vehicle type. The ton-miles option is only applicable for heavy-duty trucks and the organization need only enter the total ton-miles traveled. For product transport via freight rail, waterborne, or air transport, the organization should enter the total ton miles data.

Enter the data into the appropriate orange colored boxes (Tables 1-2) of the Calculator section titled Product Transport. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the green colored box.

#### Waste

Scope 3 emissions from waste include the disposal and treatment of waste generated. These emission factors align with the requirements of the GHG Protocol Scope 3 Standard.



#### Click on the Product Transport tab

The emission factors do not include any avoided emissions impact from any of the disposal methods. All the factors presented include transportation emissions, which are optional in the Scope 3 Calculation Guidance, with an assumed average distance traveled to the processing facility. AR4 GWPs are used to convert all waste emission factors into CO2e.

Collect information on the amount of weight disposed at your facilities, by the type of waste (plastics, paper, etc.) and disposal method (recycling, incineration, etc.).

Refer to the Emission Factors worksheet in the Calculator for a complete list of materials and available disposal methods.

After the data have been collected, enter the data into the appropriate orange colored boxes (Table 1) of the Calculator section titled Waste. Once the data are entered into the Calculator, the CO2e emissions are calculated and summarized in the green colored box.

#### **Purchased Offsets**

Offsets are project-based direct emission reductions and/or removals that occur outside the organizational boundary of the reporting organization.

ID	Project Description	Offsets Purchased (Metric Tons CO <sub>2</sub> e)
Trees	Forestry Project	5,000
GHG Red	uctions	
		·
	Equivalent Emission Reductions	0.0

Offsets must be quantified using an approved methodology. Offsets can be purchased from the Climate Change Institute at the right market price to offset emissions from scope 1, scope 2, and scope 3 emission sources. Ennewable emissions are not project offsets and do not convey a direct emissions of direct to their owner. RECs are measured in AlWh units, whereas project offsets are measured in tons of direct emission reductions.

Quantity of offsets purchased in metric tons CO2e for each offset project.

Enter the data into the appropriate orange colored boxes (Table 1) of the Calculator section titled Offsets. Once the data are entered into the Calculator, the CO2e emissions are summarized in the green colored box.

Convert From	Convert To	Multiply By	Units
pounds (lb)	gram (g)	453.6	g / lb
pounds (lb)	kilogram (kg)	0.4536	kg/lb
pounds (lb)	metric ton	0.0004536	metric ton / lb
kilogram (kg)	pounds (lb)		lb / kg
gram (g)	short ton	0.000001102	
kilogram (kg)	short ton	0.001102000	short ton / kg
metric ton	short ton	1,102	short ton / metric ton
pounds (lb)	short ton		short ton / lb
short ton	short ton		short ton / short ton
metric ton	pounds (lb)		lb / metric ton
metric ton	kilogram (kg)	1,000	kg / metric ton
Volume			
Convert From	Convert To	Multiply By	Units
standard cubic foot (scf)	US gallon (gal)	7.4805	gal/scf
standard cubic foot (scf)	barrel (bbl)	0.1781	bbl/scf
standard cubic foot (scf)	iters (L)		L/scf
standard cubic foot (scf)	cubic meters (m3)		m3/scf
US gallon (gal)	barrel (bbl)	0.0238	bbi / gal
US gallon (gal)	iters (L)	3.785	L/gal
US gallon (gal)	cubic meters (m3)	0.003785	m3 / gal
barrel (bbl)	US gallons (gal)	42	gal / bbl
barrel (bbl)	iters (L)		L / bbl
barrel (bbl)	cubic meters (m3)		m3 / bbl
iters (L)	cubic meters (m3)		m3/L
iters (L)	US gallon (gal)	0.2642	gal/L
cubic meters (m3)	barrel (bbl)	6.2897	bbi / m3
cubic meters (m3)	US gallon (gal)	264.2	gal/m3
	iters (L)	1,000	L/m3
cubic meters (m3)			
Energy			
Energy Convert From	Convert To	Multiply By	Units
Energy Convert From klowatt hour (kWh)	Btu	3.412	Btu / kWh
Energy Convert From		3,412 3,600	

The rest of the tabs on the spreadsheet contain reference data and help sheets.

#### **Summary**

Once you have finished collecting and entering the data you should check your figures, particularly to ensure that the units of measurement that you chose are correct for the applied emission factor.



#### Click on the Summary tab to see your results

You should now create your organization's GHG statement and a template can be found on our website. Keep copies of your files including the Excel spreadsheet calculator file, a copy of the corporate protocol and any emails or notes of meetings relating to your GHG survey and accounting methods.

There may be some emissions that you need to account for, such as by employees working from home. This is more difficult to estimate. You can find average estimates put out the UNFCC carbon calculator which are perfectly acceptable. There is also guidance on the EPA website.

By estimating your organization's carbon footprint you have taken most important step towards carbon neutrality. This gives you the data required to effectively conduct an ongoing an emission reduction program. It also allows you to know how many tonnes of carbon offsets are required for your organization to become climate neutral and gain registration through the Climate Change Institute.

