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The World Bank Group Greenhouse Gas Emissions Inventory Management Plan

for Internal Business Operations FY24

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Acronyms and Abbreviations

- CBA IFC Corporate Budget and Business Administration
- CBARE IFC Corporate Budget and Business Administration Real Estate
- CRP Corporate Responsibility Program
- CH_4 methane
- CO_2 carbon dioxide
- CO_2eq carbon dioxide equivalent
- CERP IFC Corporate Environmental Responsibility Program
- CFC chlorofluorocarbon
- DEFRA Department for Environment, Food and Rural Affairs (UK)
- EIA United States Energy Information Administration
- EPA United States Environmental Protection Agency
- GHG greenhouse gas
- GCS Global Corporate Solutions
- GWP global warming potential
- HCFC hydrochlorofluorocarbon
- HFC hydrofluorocarbon
- HVAC heating, ventilation, and air conditioning
- IEA International Energy Agency
- IFC International Finance Corporation
- IMP Inventory Management Plan
- IPCC Intergovernmental Panel on Climate Change
- kWh kilowatt-hour
- N_2O nitrous oxide
- PFC perfluorocarbon
- SF_6 sulfur hexafluoride
- WBG World Bank Group
- WRI World Resources Institute

Key Contacts

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INTRODUCTION

This Greenhouse Gas Emissions Inventory Management Plan (IMP) provides a detailed foundation for the World Bank Group[1] to comprehensively measure and manage greenhouse gas (GHG) emissions from its internal global business operations. It does not apply to the lending or technical assistance activities provided to public and private sector clients.

The IMP sets forth the current scope and vision of the World Bank Group's commitment to inventory and manage GHG emissions from its internal global business operations. It also presents an inventory methodology designed to meet the most rigorous and complete GHG accounting and reporting standards. The approach is consistent with the principles and guidance of the World Resources Institute (WRI) and the World Business Council for Sustainable Development's (WBCSD) Greenhouse Gas Protocol Initiative (GHG Protocol).

The IMP applies to offices in the United States and abides by U.S. Environmental Protection Agency (EPA) guidance for GHG inventories. The global facilities inventory is maintained on a fiscal year basis only. To ensure consistency, emissions from U.S. and international facilities are calculated with the same methodology. This IMP is utilized for reporting to external stakeholders, including the UN Climate Neutral Initiative.

This IMP was prepared to accompany the fiscal year 2024 (FY24) GHG emissions accounting results, which cover the period of July 1, 2023, through June 30, 2024, and are reported in the 2025 World Bank and IFC Annual Reports and other corporate reports.

This document provides organization-wide information, including a corporate overview and goals, the boundary conditions of the inventory, emissions quantification methods, data management methods, a discussion of the base year selection, a list of management tools, and auditing and verification processes.

WBG BOUNDARY CONDITIONS

Boundary conditions serve as the foundation for the GHG inventory by defining both the inventory's breadth and depth. To provide a rigorous and complete inventory, the World Bank Group has defined both organizational and operational boundary conditions consistent with the GHG Protocol guidance.

ORGANIZATIONAL BOUNDARY

GHG Protocol Definition

Organizational boundaries define the business and operation that constitutes an organization and therefore determine how emissions are counted for and determined. Under the GHG Protocol, organizational boundaries can be defined either by the amount of equity that an entity has in an operation ("equity approach"), or by that entity's authority to introduce and implement operating policies ("control approach"). The control approach has two sub-definitions where control can be defined as the ability to direct the financial and operating policies ("financial control approach"), or the ability to introduce and implement operating policies at the operation ("operational control approach"). The GHG Protocol requires that entities define their organizational boundaries by the approach that most accurately reflects their day-to-day practices. That approach should then be consistently applied to business operations.

Approach Taken by the World Bank Group

The World Bank Group has chosen to set its organizational boundaries for the GHG inventory according to the "operational control approach." Accordingly, it accounts for GHG emissions from locations over which it

[1] WBG consists of the following five organizations: the International Bank for Reconstruction and Development, International Development Association, International Finance Corporation, Multilateral Investment Guarantee Agency, and the International Center for Settlement of Investment Disputes. WBG operates globally and is owned by its member countries.

has direct control and where it can influence decisions that affect GHG emissions. This includes all facilities and vehicles operated by the World Bank Group, whether they are owned or leased. A portion of leased facilities operate under full-service gross leases, where the building owner/manager pays the utilities directly, and the World Bank Group does not have access to actual energy consumption information. These facilities are still considered to be under the World Bank Group's operational control. Electricity consumption and refrigerant use are estimated if these data are unavailable, as described in the Data Management section below.

World Bank locations were identified by the Global Corporate Solutions' (GCS) Corporate Real Estate team, while International Finance Corporation (IFC) locations were from the IFC Real Estate Database managed by the IFC Facilities Management team. A list of offices included in the GHG inventory can be found in Appendix E.

Headquarters Facilities

In the United States, the World Bank Group owns or leases facilities in Washington, DC, Virginia, Maryland, Pennsylvania, and New York, listed in Table 1. These offices, many of which the World Bank Group has operational control of, are particularly important, as they serve as global headquarters. About half of staff are based there, and about half of total Scope 1 and 2 GHG emissions are from these facilities.

Table 1. World Bank Group Properties in the United States in FY24

Building Name	Address	Status	Operational Control	Size (gross ft^2)	In Inventory
Archives	Pennsylvania, near Pittsburgh	Lease	WB Non-Operating	54,713	Scope 1, 2
C	1225 Connecticut Ave. NW Washington, DC 20036	Own	WB Owned	240,811	Scope 1, 2
F	2121 Pennsylvania Ave. NW Washington, DC 20433	Own	IFC Owned	803,536	Scope 1, 2
G	1776 G St. NW Washington, DC 20006	Own	WB Owned	224,164	Scope 1, 2
I	1850 I St. NW Washington, DC 20433	Own	WB Owned	601,446	Scope 1, 2
I Square	1825/1875 I St. NW Washington, DC 20006	Lease	WB Non-Operating	11,044	Scope 1, 2
J	701 18th St. NW Washington, DC 20433	Own	WB Operating	533,894	Scope 1, 2
K	2100 K St. NW	Own	IFC Operating	150,436	Scope 1, 2
MC	1818 H St. NW Washington, DC 20433	Own	WB Owned	2,065,507	Scope 1, 2
N	1899 Pennsylvania Ave NW Washington, DC 20433	Lease	WB Non-Operating	35,800	Scope 1, 2
U	1800 G St. NW Washington, DC 20433	Lease	WB Non-Operating	85,500	Scope 1, 2

UN Liaison Office	1 Dag Hammarskjold Plaza, 885 2nd Ave., 26th Fl. New York, NY 10017	Lease	WB Non-Operating	4,994	Scope 1, 2
VA Ware-house (DCC)	Dulles Commerce Center, Bldg. 100, 23760 Pebble Run Dr. Sterling, VA 20166	Lease	WB Operating	50,030	Scope 1, 2
Boro Tower	8350 Broad Street, McLean, VA 22102	Lease	WB Non-Operating	4,413	Scope 1, 2
Landover Service Center (LSC)	3301 Pennsy Dr. Landover, MD 20785	Lease	WB Operating	54,595	Scope 1, 2

SCOPE

GHG Protocol Definition of Scopes

The World Bank Group segregates its emission types by Scopes 1, 2, and 3, as defined by the GHG Protocol. The following are examples of office emissions sources from the GHG Protocol publication *Working 9 to 5 on Climate Change: An Office Guide* (WRI 2002).

Table 2. Examples of Scope 1, 2, and 3 Emission Sources as Defined in the GHG Protocol

Scope 1: Direct emissions sources	▪ Combustion of fuel in boilers or furnaces that are owned by the reporting organization ▪ Generation of electricity, steam, or heat in equipment that is owned by the reporting organization ▪ Business travel in vehicles that are owned by the reporting organization, such as company cars or corporate jets ▪ Employee commuting in company-owned vehicles, such as shuttles and company cars ▪ Fugitive emissions of refrigerant from chillers or other refrigeration units owned by the reporting organization
Scope 2: Indirect emissions sources	▪ Generation of *purchased* electricity, steam, heat, or chilled water
Scope 3: Optional sources	▪ Business travel in non-company-owned vehicles, such as rental cars, employee cars, trains, and commercial planes

Scope of Emissions Covered in the World Bank Group Inventory

Since 2008, the operational boundary of the World Bank Group's carbon inventory has included all core direct (Scope 1) and indirect (Scope 2) emissions associated with all facilities worldwide for which it has operational control, including headquarters operations in Washington, DC, all leased facilities, and all country offices. Emissions from global business air travel are included in Scope 3. Specifically:

- **Direct emissions** from sources that are owned or controlled by the World Bank Group, including emissions from on-site fuel burning equipment (for example, boilers, backup generators) and

fugitive emissions from process equipment (for example, refrigerant from refrigeration and HVAC equipment). Mobile emissions from combustion of fuel in WBG-owned vehicles are also included.
- **Indirect emissions** from electricity, steam, and chilled water purchased by the World Bank Group.
- **Other indirect emissions** from business air travel booked and paid for by World Bank Group, as well as leased vehicles operated by other organizations. Since FY20, through the WRI Cool Food Pledge, emissions from food purchased at headquarters facilities have also been included.

Greenhouse Gases Included in the Inventory

The World Bank Group's GHG inventory includes emissions of four of the six major greenhouse gases (there are no known emissions of SF_6—sulfur hexafluoride—or PFCs—perfluorocarbons):

- CO_2 (carbon dioxide)
- CH_4 (methane)
- N_2O (nitrous oxide)
- HFCs (hydrofluorocarbons)

In addition, the global GHG inventory includes emissions from CFCs (chlorofluorocarbons) and HCFCs (hydrochlorofluorocarbons) as supplemental emissions. Both types of gases are optional for inventory and reporting purposes under the GHG Protocol and the EPA Center on Corporate Climate Leadership guidance.

WORLD BANK GROUP BOUNDARY CONDITION ASSUMPTIONS

To the extent possible, this IMP attempts to standardize the inventory methodology for all World Bank Group offices. The boundary assumptions made are outlined below.

Assumptions: Global Inventory

- For shared World Bank and IFC office space, emissions are apportioned between the two by percentage of total area, as detailed in lease agreements and memoranda of understanding. When this information is not available, the share of staff from each institution is used as a proxy for the percentage of total area occupied. For example, if equal numbers of World Bank and IFC staff work in an office for which the space allocation is unknown, then it is assumed that each institution occupies an equal amount of space in the office.
- Data related to electricity use, stationary combustion, refrigerant recharge amounts, purchased steam, purchased chilled water, and water usage in shared facilities are collected at the office level where appropriate. Emissions are then apportioned to each institution as described above.
- For business travel, only data for air travel booked and paid for by the World Bank Group and for travel by contracted car service are collected and included.
- While every office is provided an opportunity to report activity data where possible, the World Bank Group's online data management system gives offices with five or fewer employees the option to (a) default to estimated emissions for electricity use and refrigerants (the methodologies for estimations are provided in relevant sections below in this IMP), and to (b) be exempted from reporting on-site fuel and mobile sources if the information is not easily accessible (estimates are not made for on-site fuel and mobile sources, as there is no credible methodology to do so).
- Residential spaces owned by the World Bank Group in developing countries are not included in the inventory, because the WBG does not control the operations of these buildings, and activity data are difficult to obtain.

Exceptions

- The World Bank and IFC share space in the Archives (near Pittsburgh, PA), the Business Continuity Center (in the LSC, in Landover, MD), and the Warehouse (in the DCC, in Sterling, VA). These facilities are leased by the World Bank, and since the World Bank has operational control over the buildings, it reports 100 percent of the associated emissions.
- Emissions are estimated for buildings in Washington, DC, where the World Bank Group lacks operational control and where the building management company does not provide data. To

estimate emissions, assumptions about electricity usage are made based on the area leased. Refrigerant emissions are estimated based on the technique described below. Due to lack of access to information, estimates are not made for on-site fuel consumption.

- Shuttle vans in Washington, DC, leased by the World Bank and used by both World Bank and IFC employees. The World Bank accounts for 100 percent of these emissions, as it controls the van leases and employs the van drivers. Because the IFC does not own any vehicles in Washington, DC, no associated emissions are reported.

EMISSIONS QUANTIFICATION

The following sections explain the GHG emissions quantification approach for each of the World Bank Group's emissions sources contained within the boundaries of the current fiscal year GHG inventory.

All methodologies are based on guidance from the GHG Protocol, with emission factors taken from governmental and international organizations such as the Intergovernmental Panel on Climate Change (IPCC), the U.S. EPA, and the International Energy Agency (IEA). All sources are noted in the appendices.

Emissions for both country offices and headquarters facilities are calculated using similar equations. An annual survey is conducted to collect activity data from World Bank Group locations on the Master Location List (Appendix E). The web-based data management system that this IMP refers to is UL360. See Appendix E for screenshots from the survey.

When activity data are unavailable, emissions estimates are made for electricity and refrigerants, based on office area. Data gaps and data quality issues still exist in the World Bank Group's inventory. These will be addressed as additional and more accurate data become available over time. The main data gaps are in country offices, particularly in smaller offices.

SCOPE 1: DIRECT EMISSIONS

ON-SITE (STATIONARY) COMBUSTION – SCOPE 1

GHG Protocol Definition

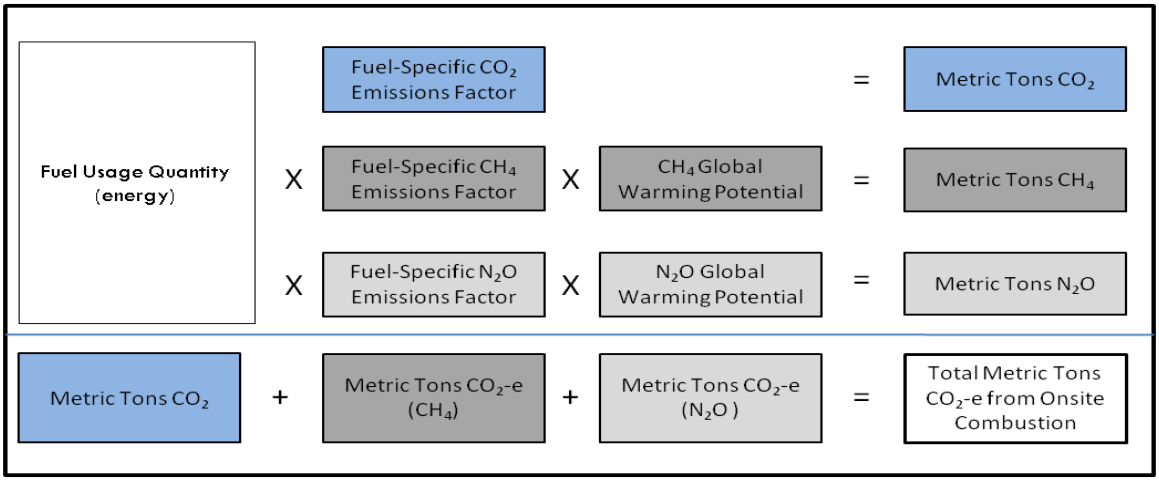
On-site combustion of fossil fuels for the generation of electricity, heat, or steam is one source of direct emissions.

Quantifying Emissions from On-site (Stationary) Combustion

To calculate the GHG emissions from on-site fuel combustion, the World Bank Group collects data on the amount of fuel purchased each year. To be conservative, all fuel purchased is also assumed to be combusted in on-site operations in the same year. An appropriate emissions factor for each fuel type used is applied. Fuels used at World Bank Group locations include diesel, gasoline, natural gas, propane, liquefied petroleum gas (LPG), and kerosene.

Emissions are determined for each fuel source by multiplying the total amount of fuel purchased for the year, expressed in units of energy, by the appropriate emissions factors for CO_2, CH_4, and N_2O. If the amount of fuel is reported in terms of volume or mass, this quantity is converted to units of energy based on the fuel's heat content. Heat contents for specific fuels are listed in Appendix A. The totals for CH_4 and N_2O are multiplied by the respective gases' global warming potential (GWP) to calculate CO_2 equivalent (CO_2eq) emissions. See Appendix A for a table detailing stationary fuel emissions factors. The sum of CO_2 and CO_2eq emissions for all fuels combusted is the total emissions for the year, reported in CO_2eq. Figure 1 summarizes how the calculations are made.

Figure 1. On-site Fuel Combustion Emissions Calculation

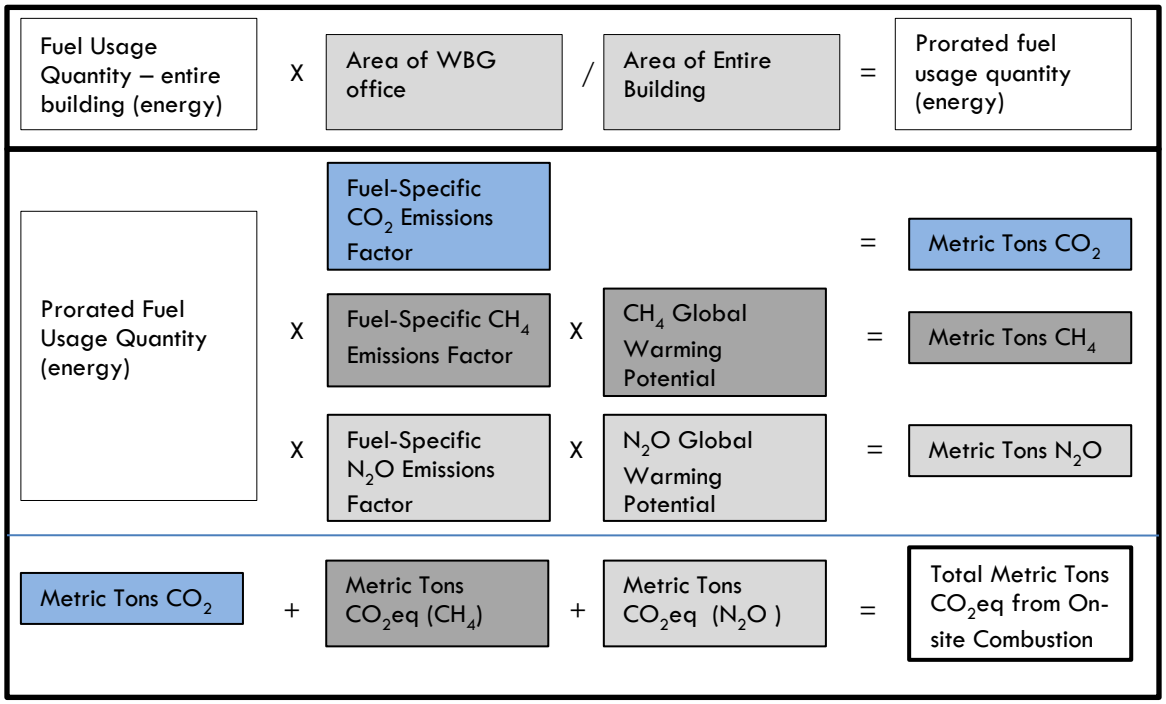


Source: World Bank staff.

Methodology for Estimating Emissions from On-site (Stationary) Combustion

Occasionally, World Bank Group offices can only provide data for the total fuel use of the entire building, even though they only occupy or lease a portion of it. In this case, if both the total building area and the area of the space occupied by the World Bank Group are known, the total fuel use is prorated for the occupied space. It is then multiplied by the appropriate emissions factors to calculate total CO_2eq emissions for the year. Figure 2 summarizes the methodology for the calculation.

Figure 2. Prorating On-site Fuel Combustion Emissions Calculation



Source: World Bank staff.

There is no credible methodology to estimate emissions for missing on-site fuel data. The World Bank Group anticipates that data availability will improve in years to come, as offices gain more experience in gathering the data. If an office has provided reliable fuel data in previous years but did not respond to the call for data this year, fuel use from the previous year is used as a proxy for this year's fuel use.

REFRIGERANTS – SCOPE 1

GHG Protocol Definition

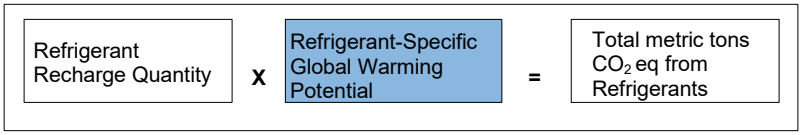
Refrigeration and air conditioning equipment leak refrigerants. GHGs from heating, ventilation, or air conditioning (HVAC), refrigeration, and freezer units are not intentionally released, but escape into the atmosphere as fugitive emissions. This may occur during installation, operation, maintenance, and/or disposal of such units. CO_2 equivalent emissions for each refrigerant are calculated by multiplying the mass of refrigerant used by its global warming potential (GWP).

The GHG Protocol lays out two methods for calculating the GHG emissions of refrigerants. The first is based on the amount of each type of refrigerant purchased each year for each location (quantity-purchased method). The second method is based on the capacity and leakage characteristics of the equipment used; it requires knowing the total capacity for refrigerants in each type of equipment used at a location—HVAC, refrigeration, and freezer units; the manufacturer's stated leakage rate for that type of equipment, and the type of refrigerant used in each type of equipment. Due to limited information availability, the first method is used for the World Bank Group inventory.

Quantifying Emissions from Refrigerants

Refrigerant CO_2 equivalents are calculated by multiplying the weight of escaped refrigerant by the corresponding GWP. The GWPs for refrigerants reported in the inventory are taken from the IPCC or from sources referencing the IPCC. See Appendix B for details on the GWPs of refrigerants and the sources used. If the type of refrigerant is unknown ("other" is chosen in the online survey), the refrigerant is assumed to be HFC-134a. See Figure 3 for the preferred calculation methodology, and Table 3 for the calculation method used in cases where refrigerant data are not available.

Figure 3. Refrigerant Emissions Calculation (Preferred)



Source: World Bank staff.

Estimating Emissions from Refrigerants

In some cases, World Bank Group country offices provide the amount of refrigerant purchased for the building as a whole, not for the specific area they occupy. If both the total building area and the area of the space occupied are known, the total refrigerant recharge amount is prorated for the occupied space and then multiplied by the refrigerant-specific GWP to calculate the CO_2eq emissions for that office.

In the event that activity data (refrigerant purchases) are not available, emissions are estimated based on the refrigerant emission rate (ton refrigerant emitted/ft^2/year) for the area of the building or office space occupied by the World Bank Group.

The method used to calculate this refrigerant emission/intensity rate is laid out in Table 3. It starts with an estimate of the area covered per ton of cooling (500 ft^2 per ton is commonly used in the United States, and is used globally for this World Bank Group inventory). This is then multiplied by a conversion factor of one ton of cooling per kilogram (kg) of refrigerant recharge, with an assumed leakage rate of 10 percent. This provides an estimated amount of refrigerant recharge per square foot, per year (ft^2/year).

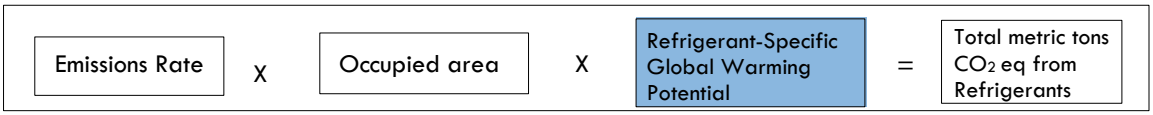
Table 3. Assumptions Used to Create Emission/Intensity Rate for Refrigerant

Step	Amount Assumed	Source
Estimated area per ton of cooling (ft^2/ton)	500	HVAC general guideline in the United States
Refrigerant charge per cooling ton (kg/ton)	1	Climate Leaders – Direct HFC and PFC Emissions from Use of Refrigeration and Air-Conditioning Equipment
Annual operating loss factor	10%	Climate Leaders – Direct HFC and PFC Emissions from Use of Refrigeration and Air-Conditioning Equipment Table 2: Type of Equipment – Residential and Commercial A/C
Emission Rate (ton refrigerant per ft^2-year)	0.0000002	

Source: World Bank staff.

The emissions rate used (0.0000002 tons of refrigerant/ft^2/year) is then multiplied by the area of the space occupied by the World Bank Group, and then by the GWP of the refrigerant type specified. If the refrigerant type is unknown, it is conservatively assumed to be HFC-R134a. This number is converted to metric tons to calculate the total metric tons of CO_2eq emitted (Figure 4).

Figure 4: Estimating Refrigerant Emissions



Source: World Bank staff.

Refrigerant data is often one of the hardest pieces of information for offices to collect. While every office is provided an opportunity to report activity data where possible, the World Bank Group's online data management system allows data providers from offices with five or fewer employees, or who cannot collect the required data, the option to default to estimated emissions for refrigerants. Estimates are included for completeness. However, they represent a small portion of the World Bank Group's emissions, as WBG operations does not require intensive use of refrigeration. Data availability is expected to improve in years to come as data providers gain more experience in gathering the data.

Quantifying Refrigerant Emissions from Vehicles

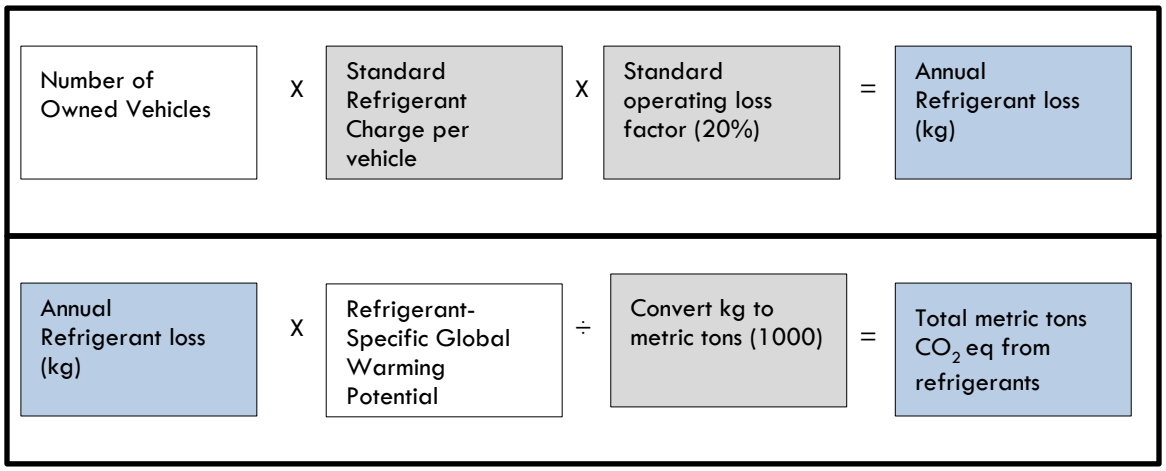
The refrigerants used for vehicle air conditioning make up a small part of the World Bank Group's GHG emissions from internal business operations. They are estimated based on the vehicle type. The World Bank Group includes data on refrigerants from vehicles used globally.

In accordance with the "control approach" for organizational boundaries, the World Bank Group reports data for fleet vehicles that it owns and leases. All mobile emissions from refrigerants, regardless of location, are calculated using the same methodology to ensure consistency in the quantification process.

Where available, the number of vehicles, grouped by each vehicle type, is multiplied by the standard refrigerant charge per unit. For example, all passenger cars are assumed to use R-134a and have a charge per unit of 0.8kg. Eight passenger cars will thus have a total charge of 6.4 kg of refrigerant. The total

charge is then multiplied by the standard operating loss factor (20 percent) to arrive at the annual refrigerant loss in kg. The annual loss of refrigerant is multiplied by the GWP of that refrigerant (most ACs use R-134a) to calculate the total metric tons of CO_2eq emitted (Figure 5).

Figure 5. Refrigerant Emission Calculations from Vehicles



Source: World Bank staff.

Table 4. Vehicle Refrigerant Charge Factors

Vehicle Type	Charge Factor	Source
Passenger Car	0.8	
Light Truck	1.2	EPA Refrigerant Guidance, 2004 Table 2

MOBILE SOURCES - SCOPE 1

GHG Protocol Definition

Mobile GHG emissions result from the combustion of fuel in an organization's owned and leased vehicles.

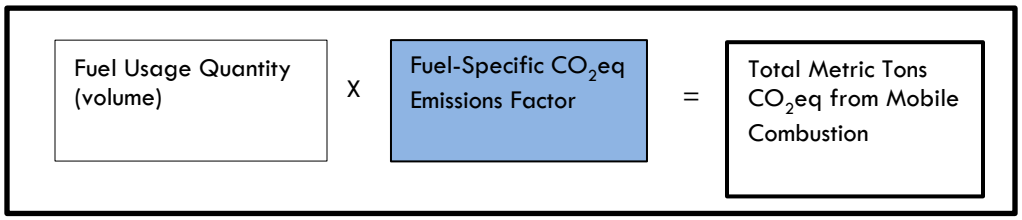
In accordance with the "operational control approach" for organizational boundaries, the World Bank Group reports data for fleet vehicles that it owns and leases. All mobile emissions, regardless of location, are calculated using the same methodology to ensure consistency in the quantification process.

In the United States, the EPA provides vehicle-specific emissions factors that are used to derive CH_4 and N_2O emissions from vehicles. To calculate these emissions, fuel usage quantity is multiplied by CH_4 and N_2O emission factors for the respective vehicle type. The CO_2, CH_4, and N_2O emissions are then added to quantify CO_2eq. Due to the challenges in collecting local operating parameters for vehicle use, which vary significantly across countries and can heavily skew emission factors unless they are accurately accounted for, country office calculations use a standardized set of CH_4 and N_2O factors for each fuel type (gasoline, diesel, and LPG). These default values provide a fair proxy until country-specific data becomes available.
Quantifying Emissions from Mobile Sources

The majority of World Bank Group offices report the quantity of fuel used from driver logs or invoices. Direct CO_2eq emissions from owned mobile combustion sources are calculated based on fuel purchase records, where available. Many vehicles have fuel consumption logs to track their purchases.

All transport fuel emissions factors are listed in Appendix C. The preferred approach to calculate mobile sources is to multiply the volume of fuel by the fuel-specific CO_2eq emissions factors to calculate the total CO_2eq emissions (Figure 6).

Figure 6. Mobile Fuel Emissions Calculation (Preferred)

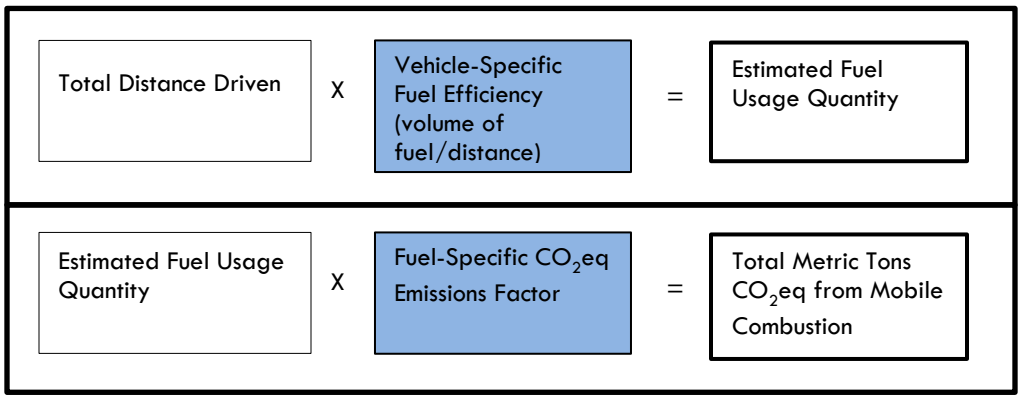


Source: World Bank staff.

Methodology for Estimating Emissions from Mobile Sources

If an office cannot report the quantity of fuel used, they are given the option to provide the distance driven. With this data, the World Bank Group estimates fuel usage based on the distance traveled and fuel economy of the vehicle type (Figure 7). When estimating emissions in this manner, gasoline is assumed to be the fuel used for sedans and motorcycles, and diesel is assumed to be the fuel used for SUVs, light trucks, and heavy trucks.

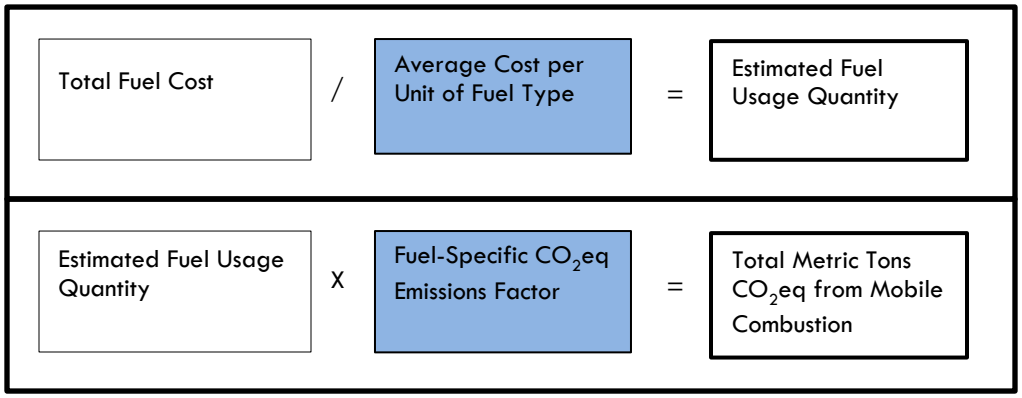
Figure 7. Mobile Fuel Emissions Calculation (Vehicle Type and Distance)



Source: World Bank staff.

If mileage and fuel economy are not available, data providers are given an option to report total cost spent on fuel over the fiscal year, and the cost of fuel (in U.S. dollars) per gallon or liter in the city location on average over the fiscal year. Data providers are also asked to indicate the type of fuel purchased. Emissions estimates are then calculated based on the total fuel costs and the average cost of fuel per gallon or liter provided (Figure 8).

Figure 8. Mobile Fuel Emissions Calculation (Fuel Cost)



Source: World Bank staff.

Not all offices report mobile fuel use. Some do not have any owned or leased vehicles. The World Bank Group's online data management system allows data providers from offices with five or fewer employees the option to be exempted from reporting mobile fuel emissions if the information is not easily accessible. If an office has provided reliable fuel data in previous years, but did not respond to the call for data this year, fuel use from the previous year is used as a proxy for this year's fuel use.

SCOPE 2: INDIRECT EMISSIONS

ELECTRICITY PURCHASES – SCOPE 2

GHG Protocol Definition

The second scope of emissions under the GHG Protocol is indirect emissions from purchased electricity. These emissions are classified as indirect because the emissions do not occur at the facility, but rather at the plant where the electricity or steam is generated from fuel. These emissions are nonetheless a consequence of the organization's activities, because although it does not own or control the sources, its actions require the generation of electricity. Organizations report emissions from the generation of purchased electricity that is used by equipment or operations controlled by them. For many, purchased electricity is one of the largest sources of GHG emissions—and the area with the most opportunities for reducing emissions.

The World Bank Group uses the GHG Protocol's location-based methodology for calculating GHG emissions from electricity. This approach reflects the average emissions intensity of grids on which energy consumption occurs. The World Bank Group does not use the GHG Protocol's market-based methodology at this time.

Electricity activity data for each World Bank Group office is collected using one of three methods, which are listed below in order of preference; the third is only used as a last resort:

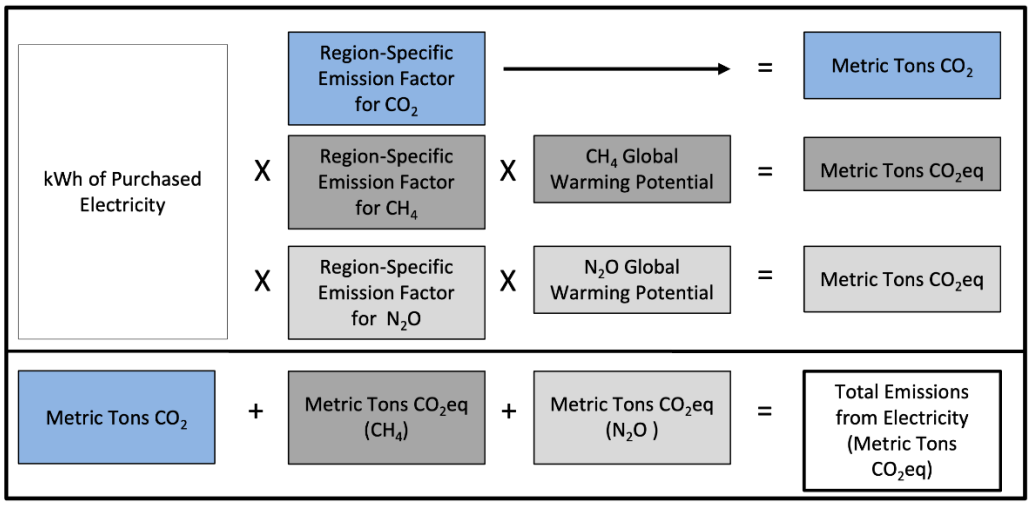
1. Where possible, annual metered electricity usage (in kWh) is reported for offices in which the data provider was able to obtain information from electricity invoices.
2. For offices without separate meters, data providers are asked to provide electricity invoice data for the entire building, the total area of the building, and the area of the space occupied by the World Bank Group. The invoice data are then prorated based on the share of space occupied.
3. For offices that do not provide any data, electricity usage is estimated based on the electricity intensity (kWh/ft^2) in the region, as established from actual data obtained through the first method. This method is explained in more detail below.

While every office is provided an opportunity to report activity data where possible, the World Bank Group's online data management system allows data providers from offices with five or fewer employees the option to default to estimated emissions for electricity use.

Quantifying Emissions from Electricity

GHG emissions from the generation of electricity include CO_2, CH_4, and N_2O. GHG emissions are calculated based on the amount (kWh) purchased, multiplied by the power plant emissions factor. World Bank Group offices often do not have enough information about the specific plants or power pools that provide them with power and electricity. Therefore, for World Bank Group facilities, GHG emissions from electricity usage are calculated based on the kWh of electricity purchased, multiplied by the subregion-, region-, or country-specific emissions factor for CO_2, CH_4, and N_2O. Figure 9 shows how GHG emissions are calculated for electricity used in each World Bank Group facility.

Figure 9. Electricity Emissions Calculation with Purchase Data (Method 1)

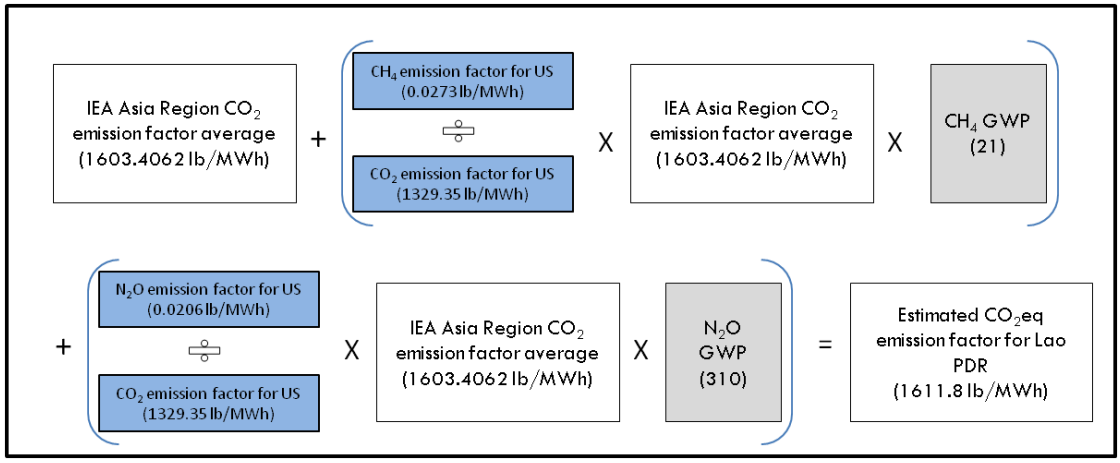


Source: World Bank staff.

For electricity purchased in the United States, the emissions factors for each year's inventory are taken from the most recent EPA eGRID to calculate GHG emissions. In accordance with EPA guidelines, previous years' inventories are not retroactively updated with the most recent emission factors. See Appendix D: Purchased Electricity Emissions Factors for details.

For all other locations, the World Bank Group uses region- or country-specific emissions factors from the IEA or country-based analogs. All emissions factors are listed in Appendix D. For some countries, IEA country-specific emission factors do not exist. In these cases, IEA region average CO_2/kWh emissions factors are used. To calculate CH_4 and N_2O emissions factors, the ratio of CH_4 and N_2O to CO_2 emissions factors is calculated, then multiplied by the CO_2 emission factor for each gas. Figure 10 provides an example.

Figure 10. Estimating Country Electricity Emission Factors: Lao PDR

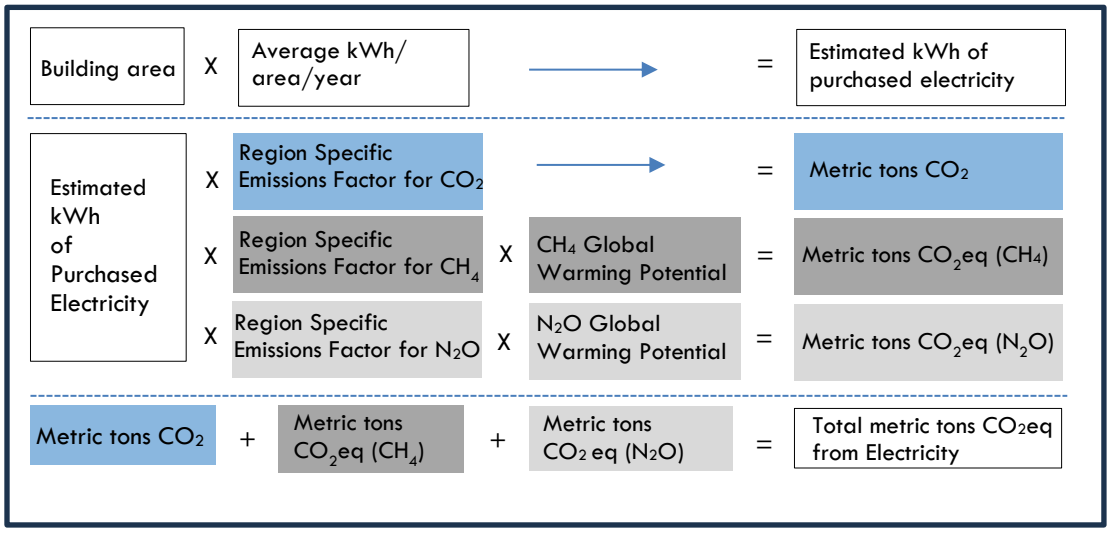


Source: World Bank staff.

Methodology for Estimating Electricity Use

As noted above, for offices that have electricity consumption data for their entire building, but not for the specific area that the World Bank Group occupies, annual electricity consumption is calculated by prorating the total annual electricity consumption of the building for the share of space occupied by the World Bank Group. For offices that are unable to provide electricity consumption data, annual electricity use is estimated by multiplying the regional electricity intensity (in kWh/ft^2/year) by the area of the building or office space (Figure 11). These averages have a minimal impact on the overall emissions footprint, as they are used only in cases where reliable or historic data is unavailable. This method typically applies to small offices and is considered a last resort for calculations.

Figure 11. Purchased Electricity Emissions Estimate Based on Building Area



Source: World Bank staff.

The electricity intensity averages[2] are calculated for each IFC or World Bank region by tallying up the annual electricity consumption for all country offices that responded within that region and dividing it by the total space occupied by all those offices. This generates a figure for the intensity of electricity consumption in the region (kWh/ft^2/yr). When calculating electricity use for offices shared by IFC and the World Bank, the average of the IFC and World Bank regional intensity figures is used. Tables 5 (World Bank) and 6 (IFC) show the country offices from which data were used to calculate each regional average.

Table 5. Electricity Intensity Averages for World Bank Regions (Based on FY08 Data)

World Bank Region	Average Based on the Following Countries	kWh/ ft^2/yr
East Asia and the Pacific (EAP)	Australia, Cambodia, China, Indonesia (Jakarta), Laos, Thailand, Timor-Leste, Vietnam (Hanoi)	11.1
Europe and Central Asia (ECA)	Albania, Armenia, Belarus, Georgia, Kazakhstan (Almaty), Kosovo, Kyrgyz Republic, Macedonia, Poland, Romania, Serbia, Tajikistan, Turkey, Ukraine	14.8
Latin America and the Caribbean (LCR)	Argentina, Bolivia, Colombia, Dominican Republic, Ecuador, Guatemala, Haiti, Honduras, Jamaica, Peru	15.2
Middle East and North Africa (MNA)	Egypt	15.1
South Asia (SAR)	India (New Delhi–70 Lodhi, 53 Lodhi Estate, Golf Links, Polish Embassy), Pakistan	18.2
Sub-Saharan (AFR)	Benin, Burkina Faso, Eritrea, Ethiopia, Gabon, Ghana, Malawi, Niger, Rwanda, Senegal, Zimbabwe	10.8
United States/Other	United States	23.0
The following country locations were omitted due to being outliers or having insufficient data: Bangladesh, D.R. of Congo, India (New Delhi–INTACH), Iran, Liberia, Mexico, Moldova, Mozambique, Paraguay, Russian Federation (Moscow), Sudan (Juba), Uruguay.		

Source: World Bank staff.

Table 6. Electricity Intensity Averages for IFC Regions (Based on FY 08 Data)

IFC Region	Average Based on the Following Countries	kWh/ ft^2/yr
Central & Eastern Europe (CEU)	Georgia, Ukraine (Kiev, Vinnytsia)	13.2
East Asia & the Pacific (CEA)	Australia, China (Chengdu, Hong Kong, Beijing), Indonesia (Aceh, Jakarta), Lao P.D.R., Philippines (Manila), Vietnam (Hanoi, Ho Chi Minh City)	8.6

[2] Electricity intensity averages based on FY08 data were used to establish a target to reduce the facilities-related emissions. The use of fixed averages allows us to track progress made against the target over time. WBG will consider updating the electricity intensity averages when establishing the new target.

Latin America & the Caribbean (CLA)	Argentina, Bolivia, Brazil (Rio de Janeiro, São Paulo), Colombia, Mexico, Peru	9.0
Middle East & North Africa (CME)	Egypt, Morocco	10.6
South Asia (CSA)	Bangladesh, Sri Lanka	20.1
Southern Europe & Central Asia (CSE)	Albania, Kazakhstan, Kyrgyz Republic, Macedonia, Serbia and Montenegro, Turkey	9.3
Sub-Saharan Africa (CAF)	Cameroon, Nigeria, Senegal, South Africa	9.0
Part 1 Countries	United Kingdom	34
United States	U.S. facilities with operational-control (F)	21.6

The following country locations were omitted due to being outliers or having insufficient data: Algeria, Belarus, Bosnia and Herzegovina, France, India (New Delhi, Indonesia (Aceh), Jordan, Kenya (Nairobi), Laos, Romania, Mongolia, Pakistan (Karachi, Islamabad), Russian Federation (Moscow), Ukraine (Vinnytsia), and Yemen.

Source: World Bank/IFC staff.

Table 7. Electricity Intensity Averages for Co-located World Bank and IFC Offices (Based on FY08 Data)

Region	kWh/ ft^2/yr
East Asia and the Pacific	9.84
Europe and Central Asia	14.78
Latin America & the Caribbean	12.09
Middle East & North Africa	12.84
South Asia	19.13
Sub-Saharan Africa	9.89
Other/Part 1	28.47

PURCHASED HEAT, STEAM, AND CHILLED WATER – SCOPE 2

Indirect emissions also include emissions from heat, steam, and chilled water purchased for use in World Bank Group offices. Although the number of offices that purchase heat, steam, or chilled water is small, those purchases have been included in the inventory for the sake of completeness. Heat, steam, and chilled water are not purchased for the offices in Washington, DC.

Quantifying Emissions from Steam

Emissions from the purchase of steam are estimated based on the amount purchased and assumptions about fuel type (natural gas) and boiler efficiency (80 percent), following the EPA Center on Corporate Climate

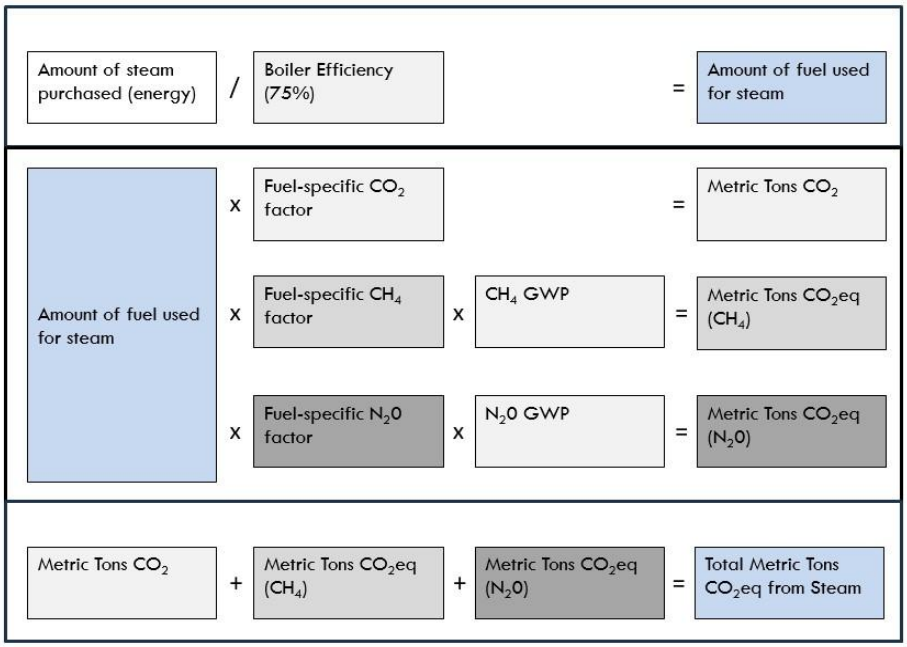
Leadership Scope 1 and Scope 2 Inventory Guidance (Table 8). Steam purchases can usually be found on utility bills or other records, with the amount usually expressed in units of energy (e.g., British thermal units, or Btu). If it is instead communicated in units of mass, the mass is converted to energy based on the heat content of steam (assumed to be 1,200 Btu/lb). The amount purchased (in units of energy) is divided by the boiler efficiency, then multiplied by the emission factors for CO_2, CH_4, and N_2O produced through natural gas combustion. Each GHG is multiplied by its GWP to calculate total emissions in CO_2eq (Figure 12).

Table 8. Assumptions for Calculating Emissions from Steam

Category	Assumption
Fuel Type	Natural Gas
Fuel to Steam Conversion Efficiency	80%
Steam Heat Content (Btu/lb)	1,200

Source: World Bank staff.

Figure 12. Estimating Emissions from Purchased Steam



Source: World Bank staff

Quantifying Emissions from Chilled Water

Emissions from chilled water are estimated by converting the ton-hours activity data into electricity consumption using a default efficiency factor of 0.75 kW per ton of cooling (obtained from the 2006

Buildings Energy Data Book[3], 2003 stock efficiency for centrifugal chillers). The activity data is defined as the reported ton-hours of chilled water delivered. The electricity consumption is multiplied by the appropriate regional/country-specific electricity emission factor.

The efficiency factor is kept consistent over time to provide a year-year comparison and will go under official review in FY26. Emissions from chilled water production are a small part of the World Bank Group emissions inventory, contributing to less than 1% of total emissions.

SCOPE 3: OTHER INDIRECT EMISSIONS

BUSINESS TRAVEL EMISSIONS – SCOPE 3

Beginning in FY19, the World Bank Group transitioned from using the UK Department for Environment, Food & Rural Affairs (DEFRA) business air travel average emission factors, to using the UN International Civil Aviation Organization (ICAO) Carbon Emissions Calculator to compute business air travel emissions (See Appendix H: Reported Emissions). The ICAO methodology is considered more accurate because it takes more specific flight data into account, and it is not UK-centric. The ICAO methodology applies the best publicly available industry data to account for various parameters such as aircraft type, route specific information, passenger load factor, and cargo carried. Updating to factor point to point travel brings the World Bank Group in line with best practice.

Quantifying Emissions from Business Air Travel

The ICAO Carbon Emission Calculator requires users to enter the original and destination airports for a direct through flight -- a flight that maintains the same flight number from origin to destination, even with stop overs. The flight is then mapped into one of 336 aircraft types, and the fuel consumption data is calculated based on the great circle distance between the airports visited. The calculator then considers the average passenger load factor (share of passenger carrying capacity used), the passenger-to-cargo ratio, and the number of departures per aircraft type. ICAO obtains this information from traffic and operational data.

The ICAO Carbon Emission Calculator calculates the fuel consumption per flight for each aircraft type, the proportion of total fuel use that can be attributed to the passengers carried, and the fuel burn per economy class-equivalent passenger. The system then calculates the average fuel consumption for the journey weighted by the frequency of departure of each equivalent aircraft type.

The average fuel consumption is divided by the total number of economy class-equivalent passengers, resulting in the average fuel burn per economy class passenger. The result is then multiplied by 3.16 (the emissions factor for jet fuel) to receive the CO_2 footprint attributable to each passenger. The complete ICAO Carbon Emission Calculator methodology is available here.

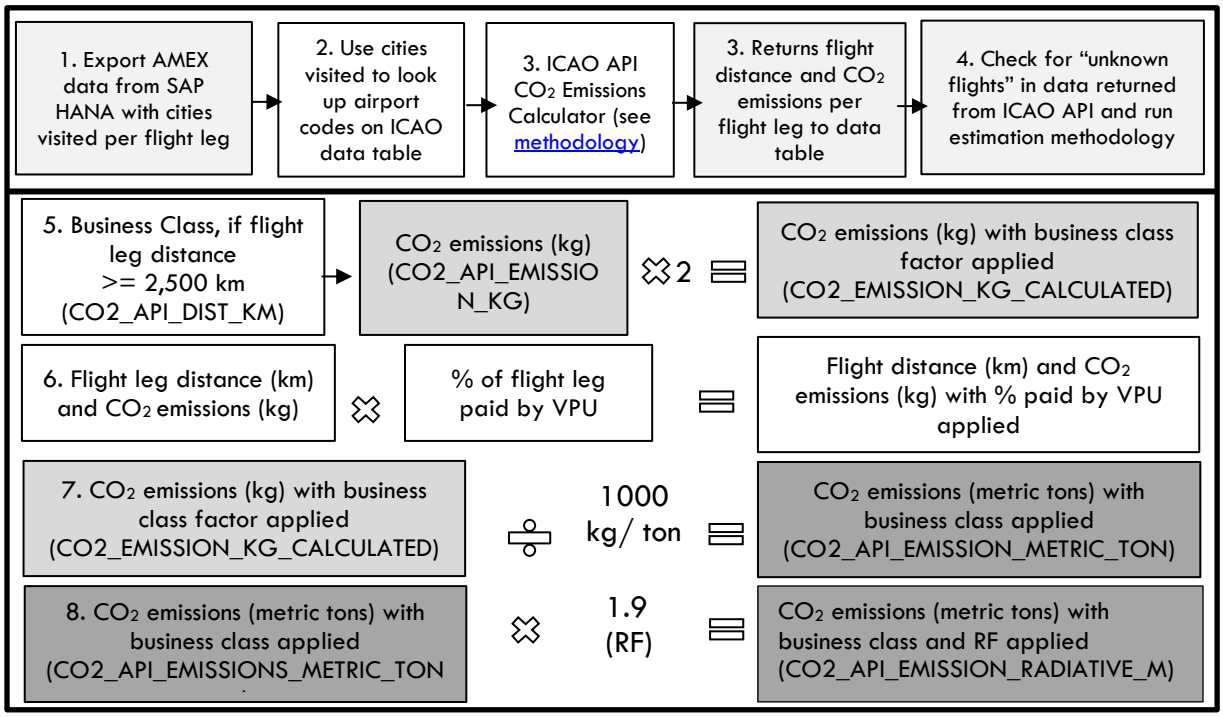
Using the ICAO Calculator to Estimate CO_2 Emissions per Flight Leg

The World Bank Group's business air travel data includes all flights paid for by the World Bank Group and booked through the AMEX system. This data are sourced from the AMEX system in SAP HANA, managed by the GCS business travel team. For every fiscal year, data for every flight leg are routinely exported from this system. The data include a unique trip ID, flight leg ID, departure city, destination city, internal fund center(s), the Vice-Presidential Unit (VPU) that financed the flight and, when multiple VPUs contributed to the cost, the share that each VPU contributed towards each flight leg. Emissions are then calculated as follows (Figure 13):

[3] U.S. Department of Energy. (2006). *2006 building energy data book* (DOE/GO-102006-2259). U.S. Department of Energy. Retrieved from http://www1.eere.energy.gov/buildings/databook/

1. The World Bank Group ITS team first uses a table provided by the ICAO focal point to match the "to" and "from" cities from the AMEX data in SAP HANA with the ICAO city and airport code list to retrieve the corresponding airport codes.
2. The airport codes are then used with the ICAO Carbon Emission Calculator API to obtain the distance of each flight leg, in kilometers (database field = CO2_API_DIST_KM); the CO_2 emissions per flight leg, in kilograms (CO2_API_EMISSION_KG); and the fuel burned, in kilograms (CO2_API_FUEL_BURN_KG).
3. In some instances, the ICAO API may return zero for the flight leg distance and CO_2 emissions due to missing or insufficient data. The World Bank Group refers to these cases as "unknown trips" and will attempt to estimate the distance and CO_2 emissions. The details of this estimation methodology are provided in Methodology for Estimating Business Air Travel Emissions below.
4. Once the "unknown trips" estimation logic is complete, the flight legs are evaluated to determine whether they qualify as business class flights. Any flight legs equal to or greater than 2,500 kilometers are assumed to be business class, and their emissions are multiplied by a factor of 2 (as advised by ICAO during the development of this API integration) and saved in the database field, CO2_EMISSION_KG_CALCULATED.
5. As noted above, some flights are paid for by multiple VPUs. In such cases, a flight leg will be listed more than once, with one record for each VPU that paid for it. To avoid double-counting these flight legs, the percentage that each VPU paid for the flight leg (PCT_ASSIGNMENT) is used to allocate the distance and CO_2 emissions. This cost center and VPU information is crucial for the World Bank Group's internal dashboard, which communicates the amount of CO_2 emissions that each VPU is responsible for.
6. Finally, the CO_2 emissions in kilograms are divided by 1,000 to display the emissions in metric tons and saved in the database field, CO2_API_EMISSION_METRIC_TON.
7. Since FY20, the CO_2 emissions in metric tons have been multiplied by a factor of 1.9 to calculate radiative forcing (CO2_API_EMISSION_RADIATIVE_M). This allows the WBG to analyze and aggregate emissions with and without radiative forcing applied. This approach aligns with the UK DEFRA Business travel—air greenhouse gas conversion factors methodology for indirect effects of non-CO2 emissions, which recommends a multiplier of 1.9 as a central estimate. This recommendation is based on the best available scientific evidence from the ATTICA research (Sausen et al., 2005) and the UK Climate Change Committee 2009 Guidance on Aviation (p. 127).

Figure 13. Calculating Emissions from Business Air Travel



Source: World Bank staff.

Methodology for Estimating Business Air Travel Emissions

In any given fiscal year, a small percentage of flight legs are classified as "unknown trips" because the flight data from SAP HANA are insufficient to return data from the ICAO API. Below are four different case types and the solution for each. This step is taken after the data are returned by the ICAO API and before any calculations are completed.

Case 1: Missing CNTRY_VSTD & CITY_VSTD or NEXT_CNTRY_VSTD & NEXT_CITY_VSTD

> **Case 1 Solution:** No calculation will apply, so both trip distance and CO_2 emission will be 0.

Case 2: (CITY_VSTD <> NEXT_CITY_VSTD + there is no direct flight) OR (CITY_VSTD / NEXT_CITY_VSTD is missing (XXX) + CNTRY_VSTD / NEXT_CNTRY_VSTD is available)

> **Case 2 Solution**: Average trip distance and CO_2 emissions are obtained from existing data for travel between two countries (CNTRY_VSTD & NEXT_CNTRY_VSTD).

Case 3: If (CNTRY_VSTD = NEXT_CNTRY_VSTD & CITY_VSTD <> NEXT_CITY_VSTD), but no emission data are available in the ICAO API

> **Case 3 Solution**: Obtain the square root of country area, find the slab in which the sqrt(area) fits in with the use of existing emission values, and populate the data.

Case 4: If (CNTRY_VSTD <> NEXT_CNTRY_VSTD & CITY_VSTD <> NEXT_CITY_VSTD), the airport pair cannot be found on the ICAO API to retrieve the distance and CO_2 emissions, and there is no existing average from CNTRY_VSTD to NEXT_CNTRY_VSTD

> **Case 4 Solution**: Distance will be 0, CO_2 emissions will be 0.

The World Bank Group uses a highly complex travel system to collect data. Given the size of the datasets and the number of calculations undertaken, cross-communication across the various systems can present challenges. An internal audit in FY24 identified minor inconsistencies such as rounding differences, missing charge centers, zero emissions entities, identical start and end cities, and small variations in percentage calculations. These inconsistencies are caused by system integration and appear in every data export. While recurring, they have a negligible impact on the overall accuracy of our emissions reporting.

CONTRACTOR-OWNED VEHICLES – SCOPE 3

Emissions from contractor-owned vehicles used for World Bank Group business constitute a small portion of annual GHG emissions but are included in the inventory as a voluntary Scope 3 emissions source. Emissions are calculated in the same manner as those for Scope 1 mobile emissions, except for refrigerant emissions from contractor-owned vehicles. The number of contractor-owned vehicles is often not available, and refrigerant emissions from contractor-owned vehicles are considered negligible. Therefore, the refrigerant emissions from contractor-owned vehicles are not calculated.

PURCHASED FOOD (COOL FOOD PLEDGE) – SCOPE 3

In FY20, the World Bank Group committed to the Cool Food Pledge, aiming to reduce greenhouse gas emissions from all food purchased for its headquarters' cafeterias, coffee bars, and catering operations by

25 percent by 2030, using 2019 as the baseline year. The Cool Food Pledge is managed by the World Resources Institute (WRI), an international nonprofit organization.

The scope includes all food purchases at the Washington, DC, headquarters facilities through the food vendor, Restaurant Associates, a subsidiary of Food Buy. As all country offices have different food vendors, it is currently not feasible to implement this pledge outside of World Bank Group headquarters.

Quantifying Emissions from Food Purchases at Headquarters Facilities

Most food purchasing is done online and monitored for tracking. Food purchases for the fiscal year are extracted from the Food Buy online platform in Excel format, separated by IFC and the World Bank. Restaurant Associates collaborates with the World Bank CRP and IFC CERP, and WRI Cool Food Pledge contacts to ensure the correct food categories are included. The vendor converts the exported values to metric units and enters them into the Cool Food Pledge food purchase tracking templates provided by WRI, separately for IFC and the World Bank. Once the two food purchase tracking sheets are emailed to the Cool Food Pledge, GHG emissions are estimated using the Cool Food Pledge GHG calculator.

The Cool Food Pledge GHG calculator uses emission factors from two global databases (Poore and Nemecek, 2018; Searchinger et al., 2018) to estimate GHG emissions associated with the production of food purchased. The calculator provides total food-related emissions from agricultural supply chains and food-related carbon opportunity costs. The total of these two types of emissions sums up to the total annual food-related carbon costs in metric tons of CO_2eq.

DATA MANAGEMENT

ACTIVITY DATA AND DATA MANAGEMENT

World Bank Group Data Collection

For FY24, the World Bank Group continued a centralized approach to GHG emissions data collection and management by using UL360. The online system, accessible to registered data providers at http://worldbank.credit360.com, allows users to input activity data through a simple online survey that collects information on energy use, fuel purchases, refrigerant purchases, and vehicle use. Data are also collected on water use, waste, and recycling.

Data providers in World Bank and IFC country offices are typically resource management staff, facility managers, or designated "champions" who work with the appropriate staff to collect the necessary information. Typically, a notification is sent to data providers in the first quarter of each fiscal year alerting them that the annual Carbon Footprint Survey is available for data entry. The system is secure and requires data providers to log in with a username and password. This method also provides an audit trail, so it is clear which staff member is entering the data. Upon log-in, data providers see a list of survey links for each office that they have been assigned.

As previously mentioned, Offices with five or fewer employees are provided with an option to (a) default to estimated emissions for electricity use and refrigerants, and to (b) be exempted from reporting on-site fuel and mobile sources. These options are provided to small offices due to the challenges of obtaining data, the greater likelihood of inaccuracies in reports from small offices, and the insignificant share of the World Bank Group's overall carbon inventory that these emissions represent.

In a few cases, offices that have more than five employees may not respond to the survey, either due to lack of staffing or other reasons. In these cases, the Corporate Responsibility Program (CRP) responds to the survey on behalf of the office, entering required information on office size, and using the standard estimates detailed in the sections above to quantify electricity and refrigerant emissions.

In line with the United Nation's Greening the Blue guidelines, WBG works to achieve a minimum of 80 percent of emissions calculated using data from office data submissions. As such, less than 20 percent of Scope 1 and 2 emissions will be estimated using a proxy.

To collect GHG emissions at World Bank Group facilities in Washington, DC, engineers, building managers, real estate experts, and travel management officers identified in the "Management Tools" section are asked to submit their respective data sets for the fiscal year.

Data Sources

- Office area data for World Bank offices are sourced through the GCS International Real Estate team, confirmed as possible by the data owner in each office. For IFC offices, office area is extracted from the country office real estate database and uploaded into the UL360 system. Any discrepancies may then be identified by data owners in each office. CRP stores any source files, supporting documents, and exports for reference.
- On-site fuel use for Scope 1 direct emissions data typically comes from fuel purchase receipts or records maintained by facility managers of owned buildings and from building managers or landlords for leased buildings.
- Mobile sources for Scope 1 emissions data typically come from fuel purchase receipts. Where fuel purchase data are not available, typically driver log information on fuel purchases or mileage is used.
- Fugitive refrigerant emissions for Scope 1 emissions data come from service records from the landlord or facility manager and are submitted to World Bank Group data owners as needed.
- Electricity, chilled water, and district steam usage for Scope 2 emissions data typically come from landlords for leased buildings and from monthly electric utility bills for owned buildings.
- Business travel emissions for Scope 3 originate in the World Bank Group's MyTravel system, operated by GCS Travel, which records itineraries for each traveler's trip. The business air travel data includes all flights paid for by the World Bank Group and booked through a travel management contractor, currently American Express (AMEX). The data is recorded in SAP HANA and is quality assured by World Bank WFATA. The full business travel methodology can be found in the Business Travel Emissions – Scope 3 section above.
- Mobile sources for Scope 3 emissions typically come from third-party service records, such as from a contracted taxi company.

Headquarters-Specific: USA

- Scope 1 emissions data from fugitive refrigerant emissions come from service records from the facility contractor, Donohoe, submitted to WBG engineers on an as-needed basis.
- At the World Bank, the CRP coordinates the assignment of roles and responsibilities for GHG inventory data management, collects relevant data from assigned staff, and then calculates the GHG inventory.
- At the IFC, the Corporate Environmental Responsibility Officer coordinates the assignment of roles and responsibilities for GHG inventory data management, collects the relevant data from assigned staff, and then calculates the GHG inventory.
- Scope 1 emissions data for all tracked emission sources are given in Table 9.

Table 9. Data Origins for Scope 1 Emission Sources of Headquarters

Source	Data Tracked	Data Origin	Vendor Source	Record Responsibility
Boilers and generators	Quantity of fuel consumed	Purchasing records and utility bills	Washington Gas	GCS CBARE
Air conditioning	Quantity of refrigerant	Service records	Donohoe	GCS CBARE

	replaced, removed			
Mobile combustion sources	Fuel purchased	Departmental fuel logs, purchasing card records	NA	GCS CBARE

Source: World Bank staff.

Scope 2 emissions from electricity usage at World Bank Group-owned buildings are assessed based on data from electric utility bills (Table 10).

Table 10. Data Origins for Scope 2 Emission Sources of Headquarters

Source	Data Tracked	Data Origin	Vendor Source	Record Responsibility
Electricity	Quantity of electricity consumed (kWh)	Utility bill	PEPCO	GCS CBARE

Source: World Bank staff.

QUALITY ASSURANCE

World Bank Group staff—in particular, the World Bank's CRP with support from the IFC CERP—oversee the data collection process every year as the inventory is being developed to improve accuracy and fill data gaps.

For quality assurance with the country office activity data, all office surveys are thoroughly reviewed, and clarifying questions are sent to key contacts. If clarifying information is not received, and there is a large potential for error that could skew inventory results, the data are removed from the inventory. In such cases, an estimate is made when possible. The entire process of data entry, returned data, omitted data, and accepted data is captured in the data management system, UL360, for auditing purposes.

Starting with the FY11 inventory, the data management system has implemented automated validation. When data are entered that fall outside pre-set upper and lower limits, the person entering them is required to provide an explanation, including the percentage difference from the previous year. Without this explanation, the data survey cannot be submitted for approval. Details for these validation thresholds are available in Appendix G

Additional steps to ensure data quality: Facilities

- To submit a survey, a data owner from a country office must have responded to all required questions in the survey.
- The CRP reviews every office's online survey once it has been submitted before approving. The CRP conducts specific data tests between years to identify unexpected trends or values outside normal variance ranges. Any such entries are flagged by the system and scrutinized closely by CRP. The team reviews responses by 1) comparing the office's entry to the previous year's response, and 2) ensuring the amount entered is appropriate for the particular activity and for the office size. If any clarifications or questions are required, the CRP uses the feedback modules available in UL360 to query data points and/or email the data provider from the CRP shared email account. The query is then sent to the data owner, who must address the query before resubmitting the survey to CRP for approval.
- Beginning in FY24, CRP added an additional layer of quality assurance for GCS-owned and managed facilities. Due to GCS's direct relationship with these facilities, GCS initiates the preliminary review for emissions data of these facility types. GCS provides extra guidance to

facility managers on the data collection protocol, mirroring procedures established by CRP. As part of the initial review, GCS focuses on filling gaps in data input and identifying any irregularities in values. GCS provides the first approval of data quality in UL360, to which after, the survey is submitted to CRP for an additional assessment. CRP's assessment follows the procedure as outlined above. The two-tiered review process adds an additional layer of assurance, reinforcing the reliability of emissions data from facility operations.

- Once the majority of data has been submitted, CRP does a final layer of quality assurance for electricity usage data, since this is the second-largest emissions source, after air travel. The CRP reviews kWh usage per square meter intensity per year for each office, looking for any figures that are well above or below the average range for the region in which the office is located. The additional level of quality assurance is conducted by a different CRP team member than the one who originally approved the survey, ensuring that two independent reviewers have assessed the data integrity.
- If any outliers are found, the data providers are contacted for supporting documentation and clarification. If the supporting documentation is not available or no traceable values can be found, then the CRP team member follows the methodology for the data type outlined in this document, such as copying reliable data from prior years or setting the system to estimate emissions.

Additional steps to ensure data quality: Business Air Travel Emissions

Beginning in FY24, CRP introduced an enhanced quality assurance process for Scope 3 business air travel emissions. As part of this effort, CRP has gained increased oversight of data governance in the collection of business air travel data. A series of internal checks has been implemented at the point of data collection to verify the accuracy of emissions calculations based on the ICAO methodology, which is largely automated. These checks include identifying outliers, duplicate records, and rounding errors.

- When issues are found that could materially affect data quality, CRP works with the World Bank Group's Information Technology Services (ITS) to initiate a formal correction process.
- The data correction process includes several steps to ensure data accuracy. It begins with identifying the errors, followed by a technical investigation to determine the root cause.
- Once the issue is understood and addressed, monitoring checks are put in place to prevent similar errors in the future.
- The process concludes with formal approval by all relevant data owners to confirm that the correction is accurate and complete.

DATA GAPS

Data gaps still exist for all emissions sources. The biggest gaps are for on-site fuel and refrigerant leakage data from country offices, particularly in situations of fragility, conflict, and violence (FCV). However, those emissions represent a very small percentage of the overall World Bank Group GHG inventory, estimated to be a small percentage of the total emissions. Estimates are used to fill refrigerant data gaps, and previous years' data, where available, are used to fill on-site fuel use gaps, as explained in this IMP.

Data gaps related to business air travel are documented as "unknown trips," and estimates are used where possible. This is detailed in the Methodology for Estimating Business Air Travel Emissions section of this document. In addition, group trips (trips booked in the travel system as "Group") are not captured due to the way our payment system communicates with the travel platform.

If a major known data gap is identified, such as the reporting of a large amount of stationary fuel combustion for one fiscal year in an office, but a lack of data in the next, the data gap will be filled by first making every effort possible to determine the activity data. If this is not available, the previous year's data are used. However, if it is known that there has been a major change in the size of the office, and actual data are not available, the activity data will be estimated as detailed above.

Specific to Headquarters in Washington, DC

At the World Bank Group headquarters in Washington, DC, the following actions are taken to prevent errors:

- GCS and CRP assess the list of GCS managed properties to ensure that the inventory includes all leased and owned facilities, as well as to confirm the area where possible. CBA and CRP assess the list of IFC-managed properties to ensure that the inventory includes all leased and owned facilities, as well as to confirm the area of all existing space.
- GCS and CRP check each World Bank-managed facility records for stationary fuel sources, including generators, boilers, and chillers, match the fiscal year totals entered in UL360. CBA and CRP check that each IFC-managed facility records for stationary fuel sources including generators, boilers, and chillers match the fiscal year totals entered in UL360.
- CRP check all World Bank and IFC vehicle fuel records match the fiscal year totals entered in UL360.
- GCS and CBA review utility bills provided by the utility company to ensure that the patterns are consistent with use. Upon changes to the bills, GCS notify CRP, and CBA to update the inventory.
- All "owners" of World Bank Group vehicles are responsible for their own fuel logs and reporting.

DATA SECURITY

UL360 is designed to run over standard security protocols, such as SSL for web access. Core permissions, such as read and write access, are highly controlled and documented by the World Bank CRP and the IFC CERP. The list of users may be provided upon request.

Information compiled for the World Bank Group GHG inventory will be maintained by the World Bank CRP and the IFC CERP. Both teams securely store their files and data on the World Bank Group's cloud server.

CORPORATE REPORTING FREQUENCY

Emissions source data are collected once a year after the close of each fiscal year. It takes several months to finalize emissions calculations. Therefore, the finalized data and the accompanying IMP are reported with a one-year lag.

BASE YEAR

The World Bank Group completed its first global GHG inventory in FY07. The inventories in FY07 and FY08 were for learning and educational purposes—teaching country offices about carbon inventory data collection and identifying data gaps. The FY09 inventory was the first using a web-based survey and was also used as a learning experience.

The IFC has identified FY08 as its base year for reducing electricity use per workstation in its Washington, DC, office. IFC previously set and achieved its headquarters-based electricity reduction target of 20 percent kWh/workforce from fiscal year 2008 to fiscal year 2015.

The World Bank set FY10 as the base year for reducing emissions from managed and owned offices by 10 percent by FY17. This target was met and exceeded, with facility-based absolute GHG emissions reduced by 20 percent between FY10 and FY17.

The World Bank Group has adopted a new global corporate carbon emissions reduction target in line with climate science: to reduce direct and indirect carbon emissions (Scopes 1 and 2) from facilities worldwide by 28 percent by 2026 from a 2016 baseline. To achieve this target, IFC pledged a 20 percent reduction, and the World Bank pledged a 30 percent reduction of facility-related emissions (Scopes 1 and 2) over the same period. A range of measures are being implemented, including using renewable energy wherever feasible and improving energy efficiency.

In FY20, the World Bank Group signed the Cool Food Pledge, committing to reduce food-related GHG emissions from its headquarters' cafeterias, coffee bars, and catering operations by 25 percent by 2030 relative to a 2019 baseline.

ADJUSTMENTS TO BASE YEAR EMISSIONS: STRUCTURAL AND METHODOLOGY CHANGES

Structural changes include mergers, acquisitions, and divestments and/or outsourcing or in-sourcing of GHG-emitting activities. Changes in the status of leased assets also are considered structural changes.

Methodology changes include changes in activity data accuracy, changes in emission factors, changes in electricity intensity or air travel intensity figures, and/or changes to the methodology used to calculate GHG emissions.

The discovery of significant errors in base year emissions calculations may necessitate a change in the base year emissions inventory. Significant structural or methodology changes in future years may necessitate an adjustment to the base year emissions to ensure that data are consistent and historically relevant.

The "significance threshold" requiring a change in the base year emissions would be a 1 percent change in the total corporate-wide GHG emissions inventory from the previous calculation.

Changes Due to New Emission Factors

If there is a change to published emission factor(s), the emission factors will be changed for each of the previous years as well as the current year, provided they meet the 1 percent significance threshold. By changing the emission factors for each of the previous reporting years, the emission calculations remain historically consistent and relevant, since the same factors are used throughout.

Changes Due to Errors

Arithmetic and data entry mistakes can occur while recording and reporting emissions data. If errors are identified during subsequent year inventory reporting that trigger the significance threshold, corrections to the previous inventories will be made.

Changes Due to Data Accuracy and Availability

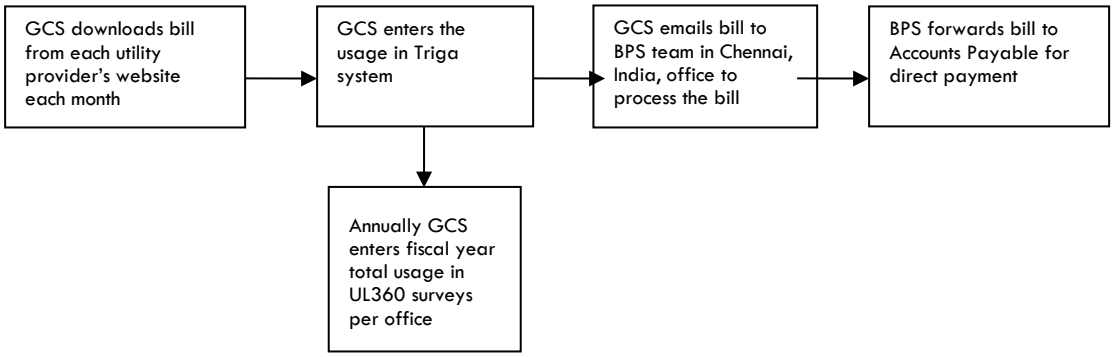
If new data are available on source emissions that were not previously available, or new methodologies result in obtaining more accurate data on source emissions, an adjustment to previous years may be required. In such cases, the significance threshold will be evaluated to determine whether adjustments to past years' inventories are warranted.

MANAGEMENT TOOLS

ROLES AND RESPONSIBILITIES

Each World Bank Group office is encouraged to create a plan to track roles and responsibilities (e.g. Table 10). This IMP contains detailed roles and responsibilities for Washington, DC. For other offices, please reach out to key contacts.

Table 11. Roles and Responsibilities for Data Reporting

Emission Source	Location	Department Responsible	Persons Responsible
Electricity, boilers, generators, refrigeration	Owned World Bank buildings in the United States	GCS	Project Manager, Plant Operations, GCS Lead Engineer, Donohoe Facilities Services
All utility records from electricity and natural gas consumption from **owned buildings** are kept in two forms: paper and electronic (in the World Bank's accounting system, SAP). The paper form is filed twice within GCS. The process for electricity bills and for natural gas and diesel purchases for boilers and generators is as follows:  Refrigerant replacement and replenishment are recorded by the servicing company, Donohoe, which submits an electronic report to the World Bank Contract Manager for each service instance. A hard copy of the report is maintained by Donohoe in its World bank office. The engineer for the building containing the chiller that was serviced will also maintain a copy of the file. The World Bank will maintain these records for three years, as required by the EPA.			
Electricity, boilers, generators, refrigeration	Leased World Bank buildings in the United States	GCS	Project Manager, Plant Operations, GCS
For **leased World Bank buildings**, as a tenant, the World Bank does not have direct access to utility bills. Landlords are contacted as needed (at least annually for the GHG inventory) to seek the information. In line with standard industry practice, utility data are provided to the World Bank prorated by square footage. This information is received by email and retained indefinitely. In the absence of concrete data, estimations are made based on intensity rates (kWh/ft^2).			

<table>
<tr><td>Electricity, boilers, generators, refrigeration</td><td>Owned IFC buildings in the United States</td><td>CBA</td><td>Donahoe</td></tr>
<tr><td colspan="4">All utility records from electricity and natural gas consumption from the IFC F building are kept in both paper and electronic form. The paper form is filed in the office of the IFC Chief Engineer, part of the Facilities Management team. There it is scanned, and electronic copies are stored on the shared network drive and in the accounting software system, managed by Donahoe—IFC's facilities management servicing company. On a monthly basis, the data is manually entered into spreadsheets organized by utility type (stored on IFC's shared network drive) and then imported into one footprint summary spreadsheet (also stored on IFC's shared network drive). All these records are kept indefinitely.

Refrigerant replacement and replenishment is recorded by the servicing company, Donahoe, which submits an electronic report to the IFC Facilities Management team. A hard copy of the report will be maintained by Donahoe. The engineer for the building containing the chiller that was serviced will also maintain a copy of the file.</td></tr>
<tr><td>Mobile combustion sources</td><td>Owned World Bank vehicles</td><td>GCS</td><td>Customer Service Representative, GCS

Executive Assistant, GCS</td></tr>
<tr><td colspan="4">Fuel usage records for World Bank-owned vehicles are kept and reported by individual units. For the majority of vehicles, which are owned by Security, the fuel usage is tracked as follows:

Driver fills up vehicle with p-card → Driver notes mileage down on receipt → Driver gives receipt (which lists number of gallons and mileage) to the Customer Service Representative.
↓
The Representative retains the p-card statement and receipts to fill in spreadsheet → GCS Resource Manager authorizes payment and maintains records for three years</td></tr>
<tr><td>Business travel</td><td>Travel booked through American Express</td><td>GCS and ITS</td><td>GCS, ITS</td></tr>
<tr><td colspan="4">Business travel records are maintained by automated data extraction from the AMEX travel reporting system in SAP HANA, which the GCS business travel team manages. Then ITS follows the methodology detailed in the Business Travel Emissions – Scope 3 section to calculate emissions.</td></tr>
</table>

Source: World Bank staff.

TRAINING

Staff of the World Bank CRP, GCS, and IFC CERP receive training to keep informed on best practices and changes in sustainability-related certifications and methodologies. The training ensures quality of the organization's GHG inventory remains high.

Headquarters-Specific

At the World Bank Group headquarters in Washington, DC, the World Bank's CRP and GCS and IFC's CERP are responsible for maintaining the inventory. Thus, currently, training is targeted to the specific needs of individual staff and may entail the following:

- Attending relevant conferences;
- Reviewing GHG Protocol guidance annually;
- Attending various trainings with outside groups, such as the GHG Institute e-learning, U.S. Green Building Council, the EPA, and U.S. Department of Energy.

Country Offices

For country office staff responsible for reporting emissions source data through UL360, the World Bank's CRP and GCS and IFC's CERP have provided resources on the World Bank Group Intranet, such as video tutorials, templates for sending data requests to building managers, and other materials.

DOCUMENT RETENTION AND CONTROL POLICY

Headquarters-Specific

See "Roles and Responsibilities" section for Washington, DC, office processes.

AUDITING AND VERIFICATION

INTERNAL AUDITING

The World Bank Group conducts a desktop review of the corporate GHG inventory each year. Based on this review, any offices with unexplained significant changes in emissions will in turn trigger the need for an internal verification review of that site.

EXTERNAL AUDITING

The World Bank Group periodically hires a third-party, outside reviewer of the IMP and the corporate GHG inventory. Should an external audit be warranted, a third-party auditor will be contracted. ERT-Winrock conducted a verification of the World Bank Group FY07 inventory and IMP in FY08, while WSP Environment and Energy reviewed the FY09 Inventory and IMP in FY10, the FY11 Inventory and FY12 IMP, the FY13 inventory and IMP, and the FY16 Inventory and IMP. EY conducted the verification of the FY20 and FY23 Inventories. The most recent assurance statement is available online at http://www.worldbank.org/corporateresponsibility.

IFC annually conducts an independent third-party audit of its GHG inventory and relevant FY data as part of its Annual Report audit. An audit of the FY23 World Bank Group Inventory was completed by EY in 2024. The verification letter is available at http://www.worldbank.org/corporateresponsibility.

MANAGEMENT REVIEW

Annually, upon completion of the GHG inventory, the GHG inventory results will be presented to the Director of Global Corporate Solutions (GCS), the Director of Global Environment (ENV), and the Director of IFC Corporate Budget and Business Administration (CBA) for review. Any updates to the IMP are approved by the Manager of Global Environment at the World Bank, which oversees the CRP, and may be presented alongside the GHG inventory results to the Directors.

CORRECTIVE ACTION

Corrective actions will be implemented at the direction of the World Bank CRP and IFC CERP in response to a desktop review and/or an internal or external audit identifying a significance threshold criteria item or

other significant structural or methodological issue that warrants corrective action. Such corrective actions will be documented by changes to the IMP and/or the GHG Inventories.

APPENDIX A: STATIONARY EMISSION FACTORS

Stationary Emissions Factors							
Fuel Type	CO_2 (kg/MMBtu)	CH_4 (kg/MMBtu)	N_2O (kg/MMBtu)	CO_2eq	Unit	Heat Content	
Natural Gas	52.9515	0.005275	0.0001055	53.1148	kg CO_2eq/ MMBtu	988	Btu/ft^3 HHV
				5.31148	kg CO_2eq/ therm		
				1.88953	kg CO_2eq/m^3		
				2.70	kg CO_2eq/kg		
Gas/ Diesel Oil	78.1755	0.01055	0.00063	78.59	kg CO_2eq/ MMBtu	0.136	MMBtu/gal HHV
				2.6991	kg CO_2eq/l		
				10.217	kg CO_2eq/gal		
Residual Fuel Oil (#5 & 6)	81.657	0.01055	0.00063	81.657	kg CO_2eq/ MMBtu	0.143	MMBtu/gal HHV
Motor Gasoline	73.1115	0.01055	0.00063	73.529	kg CO_2eq/ MMBtu	0.124	MMBtu/gal HHV
				2.3272	kg CO_2eq/l		
LPG/ Propane	66.57	0.005275	0.0001055	66.98828	kg CO_2eq/ MMBtu	0.084	MMBtu/gal HHV
				1.49979	kg CO_2eq/ l		
Kerosene	75.8545	0.01055	0.00063	76.27228	kg CO_2eq/ MMBtu	0.132	MMBtu/gal HHV

Stationary Emissions Factors							
Fuel Type	CO_2 (kg/MMBtu)	CH_4 (kg/MMBtu)	N_2O (kg/MMBtu)	CO_2eq	Unit	Heat Content	
				2.46482	kg CO_2eq/l		

Source: WRI. Calculation Tool for Direct Emissions from Stationary Combustion. Calculation worksheets. December 2007. Version 3.1

APPENDIX B: REFRIGERANT EMISSIONS

Global Warming Potentials		
GHG Type	GWP	Source
CO_2	1	Intergovernmental Panel on Climate Change, Fourth Assessment Report http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml
CH_4	25	
N_2O	298	
SF_6	22,800	

PFC Type	GWP	Source
PFC-14	6,500	Calculating HFC and PFC Emissions from the Manufacturing, Servicing, and/or Disposal of Refrigeration and Air-Conditioning Equipment. Calculation Worksheets. Version 1.0. GWPs draw from Intergovernmental Panel on Climate Change, Fourth Assessment Report http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml
PFC-116	9,200	
PFC-218	7,000	
PFC-3-1-10	7,000	
PFC-c318	8,700	
PFC-4-1-12	7,500	
PFC-5-1-14	7,400	

Refrigerants		
HCFC Type	GWP	Source
R-11	4,750	Only used to measure supplemental emissions GWPs drawn from Intergovernmental Panel on Climate Change, Fourth Assessment Report http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml
R-22	1,810	
HFC Type	GWP	Source
R-23	14,800	Calculating HFC and PFC Emissions from the Manufacturing, Servicing, and/or Disposal of Refrigeration and Air-Conditioning Equipment. Calculation Worksheets. Version 1.0. GWPs draw from Intergovernmental Panel on Climate Change, Fourth Assessment Report http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml
R-32	675	
R-41	116	
R-123	77	
R-125	3,500	
R-134	1,120	
R-134a	1,430	
R-143	328	
R-143a	4,470	
R-152a	124	
R-227ea	3,220	
R-236fa	9,810	
R-245ca	1,030	
R-R407c	2,107	
HFC-4310mee	1,640	
R-404a	3,922	
R-410a	2,088	
R-227ea	3,220	

Vehicle Refrigerant Charge Factors		
Vehicle Type	Charge Factor (kg)	Source
Passenger Car	0.8	EPA Refrigerant Guidance, 2004, Table 2
Light Truck	1.2	
Aircraft	6.4	
Cooling Factor		
Region	Ft^2 per cooling ton	Source
USA	500	Cooling intensity for region per Dan Sobrinski, WSP Energy and Environment

APPENDIX C: MOBILE FUEL EMISSION FACTORS

CO_2-equivalent Emission Factors			
Fuel type	CO_2	Units	Source
Gasoline	0.002327152	tCO_2eq/l	WRI. CO_2 Emissions from Business Travel. Version 2.0. http://www.eia.doe.gov/oiaf/1605/techassist.html
Gasoline	0.008809225	tCO_2eq/gal	
Diesel	0.002699055	tCO_2eq/l	
Diesel	0.010217028	tCO_2eq/gal	
LPG	0.001499790	tCO_2eq/l	
LPG	0.005677320	tCO_2eq/gal	

N_2O, CH_4 Emission Factors – Used for Country Offices					
Fuel Type	CH_4	N_2O	CH_4	N_2O	Vehicle Type
	kg/gal	kg/gal	kg/l	kg/l	
Gasoline	0.00033075	0.00017775	0.00008737	0.0000469	Passenger Car - Gasoline - Year 2005-present
Diesel	0.000011	0.000022	2.90621E-06	5.81242E-06	Passenger Car - Diesel - Year 1983-present
LPG	0.0005994	0.0010854	0.000158	0.000286	Light Goods Vehicle – LPG
Source: GHG Protocol Stationary and Mobile Emission Factors, Table 7					
Note: N_2O, CH_4 were calculated using average vehicle fuel economy. WB/IFC only has volume (gallons or liters) of fuel consumption and the CH_4 and N_2O factors are per distance (mi or km) traveled. As a result, a corporate average fuel economy was assumed to be 22 mpg.					

N_2O, CH_4 Emission Factors – Used in United States Only			
Vehicle Type	Fuel Type	N_2O	CH_4
Passenger Cars	Gasoline	g/mi	g/mi
1984–1993		0.0647	0.0704
1994		0.056	0.0531

N_2O, CH_4 Emission Factors – Used in United States Only			
Vehicle Type	Fuel Type	N_2O	CH_4
1995		0.0473	0.058
1996		0.0426	0.0272
1997		0.0422	0.0268
1998		0.0393	0.0249
1999		0.0337	0.0216
2000		0.0273	0.0178
2001		0.0158	0.011
2002		0.0153	0.0107
2003		0.0135	0.0114
2004		0.0083	0.0145
2005		0.0079	0.0147
Vans, Pickups, SUVs		g/mi	g/mi
1987–1993		0.1035	0.0813
1994		0.0982	0.0646
1995		0.0908	0.0517
1996		0.0871	0.0452
1997		0.0871	0.0452
1998	Gasoline	0.0728	0.0391
1999		0.0564	0.0321
2000		0.0621	0.0346
2001		0.0164	0.0151
2002		0.0228	0.0178
2003		0.0114	0.0155
2004		0.0132	0.0152

N_2O, CH_4 Emission Factors – Used in United States Only			
Vehicle Type	Fuel Type	N_2O	CH_4
2005		0.0101	0.0157
Heavy-duty Vehicles		g/mi	g/mi
1985–1986		0.0515	0.409
1987		0.0849	0.3675
1988–1989		0.0933	0.3492
1990–1995		0.1142	0.3246
1996		0.168	0.1278
1997		0.1726	0.0924
1998	Gasoline	0.1693	0.0641
1999		0.1435	0.0578
2000		0.1092	0.0493
2001		0.1235	0.0528
2002		0.1307	0.0546
2003		0.124	0.0533
2004		0.0285	0.0341
2005		0.0177	0.0326
Other Non-highway		g/gal	g/gal
Small Utility	Gasoline	0.22	0.5
Large Utility	Diesel	0.26	0.58
Passenger Cars		g/mi	g/mi
1960–1982		0.0012	0.0006
1983–1995	Diesel	0.001	0.0005
1996–2004		0.001	0.0005
Light Trucks		g/mi	g/mi

N_2O, CH_4 Emission Factors – Used in United States Only			
Vehicle Type	Fuel Type	N_2O	CH_4
1960–1982		0.0017	0.0011
1983–1995		0.0014	0.0009
1996–2004		0.0015	0.001
Heavy-duty Vehicles		g/mi	g/mi
1960–1982		0.0048	0.0051
1983–1995		0.0048	0.0051
1996–2004		0.0048	0.0051
Source: EPA Climate Leaders. "Direct Emissions From Mobile Combustion Sources." May 2008			

APPENDIX D: PURCHASED ELECTRICITY EMISSIONS FACTORS

For fiscal year 2024 electricity emissions, the 2022 CO_2, CH_4, and N_2O emission factors from IEA Emission Factors 2024 edition, were used. Where specific country factors are not available, then the appropriate IEA regional average is used. The IEA factors cannot be shared here for licensing reasons, but for those who are interested, the factors can be purchased online at www.iea.org. Some countries publish their country-level emission factors and/or regional electricity emission factors. Where available, those have been used instead of the IEA factor, as documented in the table below.

Region	lb CO_2 / MWh	lb CH_4 / MWh	lb N_2O/ MWh	Source	Notes
Australia – New South Wales	1,543.23	0.0	0.0	Australian National Greenhouse Accounts Factors 2024 (NGA): For individuals and organizations estimating greenhouse gas emissions, August 2024. Section 2.2 - Electricity, Table 1 Indirect (scope 2 and scope 3) emission factors from consumption of purchased or acquired electricity: Instructions are to add the scope 2 factor + scope 3 factor for transmission and distribution loss.	https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-accounts-factors-2024
United Kingdom	491.7184448	0.000	0.000	UK: 2022 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting v2.) Electricity generated factor + UK transmission and distribution factor. Factors from UK 2024 Department of Energy Security and Net Zero's Greenhouse gas reporting: conversion factors 2024 (relies on grid mix data from 2022)	https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2024
United States – New York	885.2	0.025	0.003	eGrid 2023 released January 17, 2025	Subregion NYCW
United States – District of Columbia	594.7	0.036	0.005	eGrid 2023 released January 17, 2025	Subregion RFCE
United States – Maryland	597.7	0.036	0.005	eGrid 2023 released January 17, 2025	Subregion RFCE
United States – Pennsylvania	594.7	0.036	0.006	eGrid 2023 released January 17, 2025	Subregion RFCE
United States – Virginia	590.2	0.045	0.006	eGrid 2023 released January 17, 2025	Subregion SRVC

APPENDIX E: WORLD BANK GROUP CURRENT FISCAL YEAR MASTER LOCATION LIST

International Finance Corporation			
Region	**Country**	**City**	**Address**
CLA (Latin America & the Caribbean)	Argentina	Buenos Aires	Edificio Bouchard Plaza, Bouchard 557, 11th. Floor
CLA (Latin America & the Caribbean)	Brazil	São Paulo	Edificio Torre Sul, Rua James Joule No. 65 - 17th, 18th and 19th floors - Cidade Monções
CLA (Latin America & the Caribbean)	Colombia	Bogota	Cra. 7 No. 71-21 Torre A Piso 14
CLA (Latin America & the Caribbean)	Dominican Republic	Santo Domingo	Ave. Lope de Vega #29, Torre Novocentro, 10th Floor, Ensanche Naco
CLA (Latin America & the Caribbean)	El Salvador	San Salvador	Edificio Torre Futura 90 nivel, Locales 904-905, Calle El Mirador y 87 Avenida Norte, Col. Escalon
CLA (Latin America & the Caribbean)	Guatemala	Guatemala City	13 Calle 3-40 zona 10 Edificio Atlantis Niv. 14
CLA (Latin America & the Caribbean)	Haiti	Port-au-Prince	7, Rue Ogé, Pétion-Ville
CLA (Latin America & the Caribbean)	Honduras	Tegucigalpa	Col. Lomas del Guijarro Sur, Edificio Corporativo 777
CLA (Latin America & the Caribbean)	Jamaica	Kingston	Courtleigh Corporate Centre, 6 St. Lucia Avenue, 3rd Floor
CLA (Latin America & the Caribbean)	Mexico	Mexico City	Paseo de La reforma 483, Cuahautemoc, 18th floor, Mexico City, DF 06500
CLA (Latin America & the Caribbean)	Nicaragua	Managua	Plaza Santo Domingo, Km. 6.5 Carretera a Masaya Edificio COBIRSA 2, 5to Piso
CLA (Latin America & the Caribbean)	Panama	Panama City	N° 2105, NIVEL 2100, Building PH Ocean Business Plaza, Calle Aquilino de la Guardia and Calle 47, Urbanización Marbella
CLA (Latin America & the Caribbean)	Paraguay	Asunción	Calle España 2028 casi Brasilia - Piso 5
CAF (Africa)	Angola	Luanda	7th Floor, Domo Business Center, No. 86 Avenida Lenine, Ingombotas
CAF (Africa)	Benin	Cotonou	Boite Postale 03-2112, Route de l'Aeroport, avenue CEN-SAD
CAF (Africa)	Botswana	Gaborone	Time Square, Plot 134, Independence Ave, 1st Floor

CAF (Africa)	Cameroon	Douala	96 Rue Flatters, Suite 305
CAF (Africa)	Chad	N'Djamena	Intersection de la rue Hamit Hangata & Avenue Idriss Miskine, Quarter Biguinage
CAF (Africa)	Côte d'Ivoire	Abidjan	Immeuble Banque Mondiale, Cocody, Angle des rues Jacques Aka et Booker Washington, 01 BP 1850 Abidjan01
CAF (Africa)	Democratic Republic of Congo	Kinshasa	49 Tshatshi Boulevard
CAF (Africa)	Ethiopia	Addis Ababa	Africa Avenue, Sub City - Bole, Woreda - 03, House No - 2164, Addis Ababa
CAF (Africa)	Ghana	Accra	No. 3, Independence Avenue, Accra
CAF (Africa)	Guinea	Conakry	Immueble de L'Archeveche, Face Baie des Anges
CAF (Africa)	Kenya	Nairobi	Delta Center, Menengai Road, Upper Hill, PO Box 30557-0010
CAF (Africa)	Liberia	Monrovia	German Embassy Compound, Congo Town
CAF (Africa)	Madagascar	Antananarivo	Anosy, Rue Andriamifidy L. Razafimanantsoa
CAF (Africa)	Mali	Bamako	Hamdallaye ACI-2000, Immeauble Waly Diawara, Avenue du Mali
CAF (Africa)	Mozambique	Maputo	Jose Craveirinha Street # 160, Caixa Postal 4053
CAF (Africa)	Niger	Niamey	964 rue Avenue du Fleuve Niger Quartier Plateau , 1er Arrondissement Niamey
CAF (Africa)	Nigeria	Lagos	Allianz Place, 7th & 8th floors, 33A Alfred Rewane Road, Ikoyi, Lagos
CAF (Africa)	Rwanda	Kigali	SANLAM BUILDING: KN 3 Ave. No. 19, Nyarugenge, Kiyovu
CAF (Africa)	Senegal	Dakar	Bureau regional IFC Dakar Rue Aimé Césaire x Impasse FN 18 prolongee Fann Residence
CAF (Africa)	Sierra Leone	Freetown	3 & 3A Spur Road, Bottom Mango, Wilberfore, Freetown
CAF (Africa)	South Africa	Johannesburg	No. 14 Fricker Road, Illovo Boulevard, Illovo, 2196
CAF (Africa)	Tanzania	Dar-es-Saleem	50 Mirambo Street
CAF (Africa)	Togo	Lomé	Boulevard Gnassingbe Eyadema, Cite OUA 2000, Villa 07
CAF (Africa)	Uganda	Kampala	1 Lumumba Ave, & 4,Nakasero Rd
CAF(Africa)	Zambia	Lusaka	Evexia Commercial Complex, Church Road
CEA (East Asia & the Pacific)	Australia	Sydney	Level 18, CML Building, 14 Martin Place

CEA (East Asia & the Pacific)	Cambodia	Phnom Penh	A1 & B1 Building, Street 102, Sangkat Wat Phnom, Khan Daun Penh
CEA (East Asia & the Pacific)	China	Beijing	1501, China World Tower 2, No. 1, Jian Guo Men Wai Ave.
CEA (East Asia & the Pacific)	China	Hong Kong	14-F, One Pacific Place, 88 Queensway, Admiralty
CEA (East Asia & the Pacific)	Fiji	Suva	2nd floor, FNPF plaza building, Greig Street
CEA (East Asia & the Pacific)	Indonesia	Jakarta	Jakarta Stock Exchange Building Tower 2, 9th floor Jl. Jend. Sudirman Kav 52-53
CEA (East Asia & the Pacific)	Korea	Seoul	38 Jongno, Seoul Global Center
CEA (East Asia & the Pacific)	Lao P.D.R.	Vientiane	Xieng Ngeum Village, Chao Fa Ngum Road
CEA (East Asia & the Pacific)	Mongolia	Ulaanbaatar	MCS Plaza Building, 4th floor, Seoul Street
CEA (East Asia & the Pacific)	Myanmar	Yangon	221, Level 21, Sule Square, Sule Pagoda Road, Yangon
CEA (East Asia & the Pacific)	Papua New Guinea	Port Moresby	Lvl 3, PWC HAUS, Allotment 34,Section 44
CEA (East Asia & the Pacific)	Philippines	Manila	2301 & 2201 One Global Place, 5th Avenue - Corner 25th Street, Bonifacio Global City
CEA (East Asia & the Pacific)	Singapore	Singapore	10 Marina boulevard Marina Bay Financial Center, Tower 2, Floor 11&12, Unit 12-01, 11-01, Postcode 018389
CEA (East Asia & the Pacific)	Solomon Islands	Honiara	Heritage Park Commercial Building, Mendana Avenue, PO Box 1744
CEA (East Asia & the Pacific)	Thailand	Bangkok	28th floor, Siam Tower, 989 Rama 1 Road, Pathumwan
CEA (East Asia & the Pacific)	Timor Leste	Dili	Rua Dos Direitos Humanos, Lecidere
CEA (East Asia & the Pacific)	Vanuatu	Port Vila	IFC Vanuatu Office, Level 4, Reserve Bank of Vanuatu Building, C/O Asian Development Bank, PO Box 3221
CEA (East Asia & the Pacific)	Vietnam	Hanoi	3rd Floor, 63 Ly Thai To Street
CEA (East Asia & the Pacific)	Vietnam	Ho Chi Minh City	Level 3, Sommerset Chencellor Court, 21-23 Nguyen Thi Minh Khai Street, Dist 1
CEU (Central & Eastern Europe)	Albania	Tirana	Str. Brigada VIII-te, Pallati Lid, Basement

CEU (Central & Eastern Europe)	Armenia	Yerevan	9, G. Louisavorich Street, Yerevan Plaza, 6th Floor - Units 6-50 to 6-57, 6-59 and 6-61
CEU (Central & Eastern Europe)	Austria	Vienna	12 Prinz Eugen Str. 1040
CEU (Central & Eastern Europe)	Austria	Vienna	Investment Climate Dept, Galaxy 21, Praterstrasse 31-Floors 18th, 9th and 2nd, A-1020
CEU (Central & Eastern Europe)	Azerbaijan	Baku	90A Nizami street, The Landmark III Business Center, 5th Floor
CEU (Central & Eastern Europe)	Belarus	Minsk	6 Rumyantsev Street
CEU (Central & Eastern Europe)	Bosnia-Herzegovina	Sarajevo	Zmaja od Bosne bb (RBBH-Building B/III)
CEU (Central & Eastern Europe)	Bulgaria	Sofia	Advance Business Center 2, Samara Str., 1715 Sophia
CEU (Central & Eastern Europe)	Croatia	Zagreb	Radnicka cesta, 9th Floor, HR-100000
CEU (Central & Eastern Europe)	Georgia	Tbilisi	5B, Nino Ramishvili Street
CEU (Central & Eastern Europe)	Kazakhstan	Almaty	41-A Kazybek Bi street, 1st and 3d Floor
CEU (Central & Eastern Europe)	Kosovo	Pristina	Rruga Prishtinë – Fushë Kosovë, Rr Ali Hadri
CEU (Central & Eastern Europe)	Kyrgyzstan	Bishkek	21, Erkindik Boulevard
CEU (Central & Eastern Europe)	Moldova	Chisinau	20-1, Pushkin St
CEU (Central & Eastern Europe)	North Macedonia	Skopje	Aminti Treti 34, first floor
CEU (Central & Eastern Europe)	Poland	Warsaw	53 Emilii Plater Street, 9th Floor
CEU (Central & Eastern Europe)	Romania	Bucharest	31, Vasile Lascar Str.
CEU (Central & Eastern Europe)	Serbia-Montenegro	Belgrade	st:Bulevar kralja Aleksandra 86-90, 3rd and 4th floor
CEU (Central & Eastern Europe)	Tajikistan	Dushanbe	Ayni Street #48, 3rd floor
CEU (Central & Eastern Europe)	Turkey	Istanbul	Buyukdere Cad. No: 185, Kanyon Ofis Blogu Kat 19, Levent

CEU (Central & Eastern Europe)	Ukraine	Kiev	5, Alla Tarasova Street, Kyiv, 01001 1 Dniprovskyj Uzviz, 2nd and 3rd floor Kyiv 01010
CEU (Central & Eastern Europe)	Uzbekistan	Tashkent	PEP, 107 B Amir Timur Street, 14th and 15th Floor
CME (Middle East & North Africa)	Afghanistan	Kabul	Kabul Street no.15, House no. 238, Wazir Akbar Khan
CME (Middle East & North Africa)	Algeria	Algiers	7 bis, Chemin Mackley, Ben Aknoun 16306
CME (Middle East & North Africa)	Egypt	Cairo	PEP-MENA, Nile City Towers North Tower, 24th Floor & 25th Floor, 2005C, Corniche El Nil, Ramlet Boulac
CME (Middle East & North Africa)	Iraq	Baghdad	World Bank Iraq, British Embassy Premises
CME (Middle East & North Africa)	Jordan	Amman	Floor 5, Building No. 3F1 (Edgo Atrium Building), 14-Al Waibdeh Al Wastani, Al Abdali
CME (Middle East & North Africa)	Lebanon	Beirut	Marfaa 119, Abdallah Bayhum Street, Bourie House Building, P O Box 11 - 8577
CME (Middle East & North Africa)	Morocco	Rabat	7, rue Larbi Ben Abdellah, Souissi
CME (Middle East & North Africa)	Pakistan	Islamabad	20-A, Shahrah-e-Jamhuriat, Ramna 5 (G-5-1)
CME (Middle East & North Africa)	Pakistan	Karachi	6th Floor, Bahria Complex-III, M.T. Khan Road, Karachi
CME (Middle East & North Africa)	Saudi Arabia	Riyadh	Diplomatic Quarter, United Nations Building, P.O. Box 5900
CME (Middle East & North Africa)	Tunisia	Tunis	Immeuble Le Boulevard 3eme etage - Blocs A, B et C Les Berges du Lac II Tunis 1053
CME (Middle East & North Africa)	United Arab Emirates	Dubai	Level 5 & 10, West side, The Gate, D.I.F.C
CME (Middle East & North Africa)	West Bank and Gaza	Jerusalem	PEP-MENA, P.O. Box 54842, West Bank & Gaza, Dahiet Al Barid, Near Rosary Sisters Convent, Jerusalem
CSA (South Asia)	Bangladesh	Dhaka	Bay's Edgewater, Plot No. NE (N), 12, North Avenue, Gulshan levels 9 and 10
CSA (South Asia)	Bhutan	Thimphu	Lower Norzin Lam, BDFCL, PO Box 256 1st Floor, North End, Thimpu
CSA (South Asia)	India	Chennai	No: 11, Taramani Main Road, Taramani
CSA (South Asia)	India	Mumbai	BKC Plot C-68, G-Block bearing CTS No. 4207 Village Kolekalyan

CSA (South Asia)	India	Mumbai	Vibgyor Towers, 2nd and 6th Floor, G Block, C-62 Bandra Kurla Complex, Bandra East, Mumbai 400 051
CSA (South Asia)	India	New Delhi	6th Floor, Worldmark 3, Aerocity
CSA (South Asia)	Nepal	Kathmandu	Yak and Yeti Complex, Durbar Marg
CSA (South Asia)	Sri Lanka	Colombo	37th Floor, One Galle Face Tower, Centre Road,1A Colombo
Part 1 Countries	Belgium	Brussels	Avenue Marnix, 17
Part 1 Countries	France	Paris	66, avenue d'léna
Part 1 Countries	Germany	Frankfurt	Bockenheimer Landstrasse 43
Part 1 Countries	Japan	Tokyo	10th Floor, Fokoku Seimei Building, 2-2-2 Uchisaiwai-cho, Chiyoda-Ku
Part 1 Countries	United Kingdom	London	1 Tudor St, 6th floor, London
United States	United States	District of Columbia	2121 Pennsylvania Avenue, NW, Washington
United States	United States	District of Columbia	2100 K St, NW, Washington
World Bank			
AFR	Angola	Luanda	6th and 7th Floor, Domo Business Center, No. 86 Avenida Lenine, Ingombotas
AFR	Benin	Cotonou	Boite Postale 03-2112, Route de l'Aeroport, avenue CEN-SAD
AFR	Botswana	Gaborone	Time Square, Plot 134, Independence Ave
AFR	Burkina Faso	Ouagadougou	Zone 15 Street Pascal Zagre, Lot no. 27, plot 28
AFR	Burundi	Bujumbura	Avenue de l'Aviation, Rohero 1
AFR	Cabo Verde	Praia	Ave Achada Santo Antonio, Praia
AFR	Cameroon	Yaoundé	rue 1. 792, No. 186, Nouvelle Route Bastos, PO Box 1128
AFR	Central African Republic	Bangui	rue des Missions
AFR	Chad	N'Djamena	Intersection de la rue Hamit Hangata & Avenue Idriss Miskine, Quarter Biguinage
AFR	Comoros	Moroni	Bloc J (Villa B1), Maison des Nations Unies, Hamramba, BP. 648

AFR	Côte d'Ivoire	Abidjan	Cocody - Angle des rues Booker Washington and Jacques Aka
AFR	Democratic Republic of Congo	Goma	Lava Site Compound, Les Vulcann Quarter, la Corniche Ave 74
AFR	Democratic Republic of Congo	Goma	No. 81, Avenue de la corniche, Quartier Jes Volcans
AFR	Democratic Republic of Congo	Kinshasa	49, Boulevard Tshatshi, Kinshasa-Gombe
AFR	Democratic Republic of Congo	Kananga	208 Ave du Sapin, Quartier Malandji
AFR	Eswatina	Mbabane	Lot 3253, Somholo Road, Mbabane, Hhohho District
AFR	Equatorial Guinea	Malabo	Edificio de las Naciones Unidas en Guinea Ecuatorial, Oficina del Banco Mundial, Planta Baja, Malabo II
AFR	Ethiopia	Addis Ababa	Bole Woreda- 03 House No. - 2164, Addis Ababa, Ethiopia
AFR	Gabon	Libreville	Libreville Business Square, LBS, 3rd Etage; B.P. 4027
AFR	Gambia, The	Banjul	5 Atlantic Boulevard, Fajara
AFR	Ghana	Accra	Independence Avenue, 10th Street,Plot no. 3, Ridge
AFR	Guinea	Conakry	Immeuble de l'Archeveche, Face Baie des Anges
AFR	Guinea-Bissau	Bissau	Prédio das Naçoes Unidas, Rua Rui Djassi
AFR	Kenya	Nairobi	Delta Center Building Menengai Road, Upper Hill.
AFR	Lesotho	Maseru	Letseng Diamonds Building, 2nd Floor, CNR, Kingsway & Old School Rd
AFR	Liberia	Monrovia	German Embassy Compound, Tubman Blvd, Congo Town
AFR	Madagascar	Antananarivo	Rue Andriamifidy L. Razafimanantsoa, Anosy
AFR	Malawi	Lilongwe	Mulanje House, Plot 13-57 Off Presidential Way, City Centre
AFR	Mali	Bamako	AVENUE DU MALI, IMMEUBLE WALY DIAWARA; HAMDALLAYE ACI -2000
AFR	Mauritania	Nouakchott	Lot N. 02 F Nord Liaison Ksar (Villa No. 30, Lot A, Quartier Socogim,Boite Postale 667)
AFR	Mauritius	Port-Louis	3rd Floor Médine Mews, Chaussee Street

AFR	Mozambique	Maputo	Avenue Kenneth Kaunda, 1224
AFR	Niger	Niamey	964 rue Avenue Du Fleuve Niger Quartier Plateau, 1er Arrondissement Niamey
AFR	Nigeria	Abuja	102, Yakubu Gowon Crescent, Asokoro District
AFR	Nigeria	Maiduguri	No 1, Pompomari Bye Pass
AFR	Republic of Congo	Brazzaville	4th floor, Tours Jumelles, Avenue Amilcar Cabral, Parcelle No 76, Centre-Ville, Brazzaville
AFR	Republic of Congo	Brazzaville	Boulevard Denis Sassou Nguesso, Centre-Ville Brazzaville
AFR	Rwanda	Kigali	SANLAM BUILDING: KN 3 Ave. No. 19, Nyarugenge, Kiyovu
AFR	Senegal	Dakar	West Sud ENEA - Corniche Mermoz
AFR	Senegal	Dakar	Corniche Ouest X, Leon Gontran
AFR	Sierra Leone	Freetown	3 & 3A Spur Road, Bottom Mango, Wilberfore, Freetown
AFR	Somalia	Mogadishu	Chelsea Village, Mogadishu International Airport Zone
AFR	South Africa	Pretoria	442 and 444 Rodericks Road, Corner Lynnwood and Rodericks Roads
AFR	South Sudan	Juba	Ministry Complex, Kololo Road, Adjacent to Ministry of Health
AFR	São Tomé and Príncipe	São Tomé	Avenue of United Nations, São Tomé
AFR	Tanzania	Dar-es-Salaam	50 Mirambo St
AFR	Tanzania	Dodoma	Plot 932, Mwangaza Street, Kisasa Area, Dodoma, Tanzania
AFR	Togo	Lomé	Cite de l'OUA, 2000-Bvd Gnassingbe Eyadema
AFR	Uganda	Kampala	Plot 1, Lumumba Ave, Rwenzori House, 1st, 4th, 5th, and 6th floors
AFR	Zambia	Lusaka	Evexia Commercial Complex, Church Road, Lusaka
AFR	Zimbabwe	Harare	Block 3, Arundel Business Park 107 Norfolk Road, Mount Pleasant
EAP	Australia	Sydney	Level 8, 16 and 19, 14 Martin Place, CML Building
EAP	Cambodia	Phnom Penh	A1 & B1 Building, Street 102, Sangkat Wat Phnom, Khan Daun Penh
EAP	China	Beijing	16th and 17th Floor, China World Tower 2
EAP	Fiji	Suva	2nd floor, FNPF plaza building, Greig Street

EAP	Indonesia	Jakarta	Indonesia Stock Exchange Bldg, Tower 1 (9th floor), Tower 2 (12th, 13th and 14th Floors)
EAP	Kiribati	Tarawa	FEMA Lodge, Banraeaba, Kiribati
EAP	Kiribati	Tarawa	Top Floor, Units 5 & 6 TaoTin Plaza, Bairiki
EAP	Korea, Republic of	Incheon	37F, POSCO E and C Tower 2,241, Incheon tower-daero, Yeonsu-gu
EAP	Lao P.D.R.	Vientiane	Xieng Ngeun Village, Chanthabouly District
EAP	Malaysia	Kuala Lumpur	Level 3, Sasana Kijang, No. 2, Jalan Dato' Onn
EAP	Micronesia	Pohnpei	Cadastral plot No 046-A-06, Building Solutions Building Pohnpei
EAP	Mongolia	Ulaanbaatar	5th Floor, MCS Plaza Building, Seoul Street-4
EAP	Myanmar	Yangon	221, Level 21, Sule Square, Sule Pagoda Road, Yangon
EAP	Myanmar	Nay Pyi Daw	No. JV-001, Room 201, Building No. 3, Hilton Hotel, Taw Win Thiri Road
EAP	Myanmar	Nay Pyi Daw	No. 20/25, Kengtong Road, Zawana Theikdi Ward, Oattara Thiri Township
EAP	Papua New Guinea	Port Moresby	Lvl 3, PWC HAUS, Allotment 34, Section 44, Port Moresby
EAP	Philippines	Manila	26th Floor, One Global Place, 5th Avenue corner 25th street
EAP	Samoa	Apia	Level 6, Central Bank Building, Beach Road
EAP	Singapore	Singapore	10 Marina Boulevard, Marina Bay Financial Center, Tower 2, #34-02
EAP	Solomon Islands	Honiara	Heritage Park Commercial Building, Mendana Avenue, PO Box 1744
EAP	Thailand	Bangkok	Rama Rd office, Bangkok : 27th and 30th Floor, Siam Tower, 989 Rama 1 Road
EAP	Timor-Leste	Dili	Avenida Dos Direitos Humanos
EAP	Tonga	Nuku'alofa	Level 3, Suite 3, National Reserve Bank Bldg, Salate Rd
EAP	Tuvalu	Funafuti	Room 2, Partnership House, Vaiaku, Funafuti, Tuvalu
EAP	Vanuatu	Port Vila	The World Bank Group & ADB Level 5, Reserve Bank Building
EAP	Vietnam	Hanoi	63 Ly Thai To, 8th Floor
EAP	Vietnam	Ho Chi Minh City	Level 3, Sommerset Chencellor Court, 21-23 Nguyen Thi Minh Khai Street, Dist 1

ECA	Albania	Tirana	Ibrahim Rugova Street, Vila No 34,
ECA	Armenia	Yerevan	9 Grigor Lusavorich Street, 6th Floor
ECA	Austria	Vienna	Praterstrasse 31 - 15th, 17th, 19th-21st Floors
ECA	Austria	Vienna	12 Prinz Eugen Str. 1040 Vienna
ECA	Azerbaijan	Baku	90A Nizami street, The Landmark III Business Center, 5th Floor
ECA	Belarus	Minsk	6 Rumyantsev Street
ECA	Bosnia-Herzegovina	Sarajevo	UNITIC Tower B, Fra Andjela Zvizdovica 1
ECA	Bulgaria	Sofia	Advance Business Center 2, Samara Str., 1715 Sophia
ECA	Croatia	Zagreb	Radnicka cesta 80-IX
ECA	Georgia	Tbilisi	5A, Nino Ramishvili Street
ECA	Kazakhstan	Almaty	41-A Kazybek bi Street, 4th Floor
ECA	Kazakhstan	Astana	12 Samal Microdistrict, 14th Floor
ECA	Kosovo	Pristina	Rruga Prishtinë Fushë-Kosovë
ECA	Kyrgyz Republic	Bishkek	214, Moskovskaya Str.
ECA	Moldova	Chisinau	20-1, Pushkin St
ECA	Montenegro	Podgorica	Bulevar Džordža Vašingtona 98 81000 Podgorica
ECA	North Macedonia	Skopje	34 Aminti Treti Street
ECA	Poland	Warsaw	53, Emilii Plater St, Warsaw Financial Center, 15th Floor
ECA	Romania	Bucharest	U T I Building, 6th Floor, 31 Vasile Lascar str.
ECA	Russian Federation	Moscow	Bolshaya Molchanovka 36-1, Bldg. 1, 4th & 5th Floor
ECA	Serbia	Belgrade	Bulevar Kralja Aleksandra 86-90, floors 6 and 7
ECA	Tajikistan	Dushanbe	48 Ayni Str. Business Center "Sozidanie", block A, 3rd Floor
ECA	Turkey	Ankara	Ugur Mumcu Caddesi No. 88, Kat: 2 GOP
ECA	Turkmenistan	Ashgabat	UN House 21, Archabil Avenue, 744036
ECA	Ukraine	Kiev	5, Alla Tarasova Street, Kyiv, 01001

ECA	Uzbekistan	Tashkent	107 B, Amir Timur str.
LAC	Argentina	Buenos Aires	Bouchard 547, 28th and 29th Floors
LAC	Bolivia	La Paz	– Avenida Ballivián No. 1087, Edificio Green Tower, Calacoto
LAC	Brazil	Brasilia	SCES TRECHO 03 Lote 05-Polo 8 CEP 70200-003 Brasilia-DF
LAC	Chile	Santiago	Avenida Apoquindo 2929, Piso 13, Las Condes
LAC	Colombia	Bogota	Carrera 7 No.71-21, Torre A, piso 16
LAC	Costa Rica	San Jose	Plaza Roble Edificio El Patio, San Jose
LAC	Dominican Republic	Santo Domingo	Avda. Lope de Vega #29 Torre Novo Centro, piso 10
LAC	Ecuador	Quito	Avda. 6 de Diciembre
LAC	El Salvador	San Salvador	Edificio Torre Futura Nivel 9, oficinas 904-905, Colonia Escalon
LAC	Guatemala	Guatemala City	13 Calle 3-40, Zona 10, Edificio Atlantis, Piso 14
LAC	Guyana	Georgetown	87 Carmichael Street, South Cummingsburg
LAC	Haiti	Petion-Ville	7, rue Ogé
LAC	Honduras	Tegucigalpa	Edificio Corporativo 777, 9 Piso, Lomas del Guijarro Sur, Boulevard San Juan Bosco
LAC	Jamaica	Kingston	Courtleigh Corporate Centre, 3rd Floor, 6 St. Lucia Avenue, Kingston 5
LAC	Mexico	Mexico City	Insurgentes Sur 1605, Piso 24
LAC	Nicaragua	Managua	Edificio Cobirsa 5to Piso, Km 6.5 Carretera a Masaya
LAC	Panama	Panama City	Avenida Aquilino De La Guardia y Calle 47, Ofincina 21111
LAC	Paraguay	Asunción	Espana 2028 c- Braslia Urano Building, 5th Floor
LAC	Peru	Lima	Avenida Alvarez Calderon 185, Piso 7, San Isidro
LAC	Uruguay	Montevideo	Victoria Plaza Office Tower, Plaza Independencia 759 Piso 14
MNA	Algeria	Algiers	7 bis, Chemin Mackley, Ben Aknoun 16306
MNA	Djibouti	Djibouti	Mezz Tower, 15th floor, Route de Venise
MNA	Egypt	Cairo	Nile City Towers North Tower, 24th Floor & 25th Floor, 2005C, Corniche El Nil, Ramlet Boulac

MNA	Egypt	Cairo	Nile City Towers, North Tower, 29th Floor 2005C, Cornich El Nil, Ramlet Boulac
MNA	Iraq	Baghdad	International Zone, British Embassy premises
MNA	Jordan	Amman	5th floor of Edgo Atrium Blg, Al-Abdali district
MNA	Kuwait	Safar	Al Shuhada Street., Al Hamra Business Tower, Floor 32
MNA	Lebanon	Beirut	Abdallah Bayhum Str., Bourie Bldg, N 119, Marfaa - Downtown
MNA	Libya	Tripoli	Unit 236, 237, 246, and 247, Palm City Residences, Janzur
MNA	Morocco	Rabat-Souissi	7, Rue Larbi Ben Abdellah, Souissi
MNA	Saudi Arabia	Riyadh	1st Floor, UNDP Building, Diplomatic Quarter
MNA	Tunisia	Tunis	Immeuble le Boulvard Cite les Pins, Les Berges du Lac 2
MNA	United Arab Emirates	Dubai	Level 5 & 10, West side, The Gate, D.I.F.C
MNA	United Arab Emirates	Abu Dhabi	Floor 7, Al Maqam Tower (Tower 3), Al Maryah Island, ADGM Square
MNA	West Bank and Gaza	Jerusalem	Al Dahieh, Beit Hanina
MNA	West Bank and Gaza	Gaza	Omar Al Mokhtar St, UNDP Compound, Gaza
MNA	Yemen	Aden	Socotra St. Plot# 37, Khormakser
Other	Belgium	Brussels	Avenue Marnix 17, 2nd floor
Other	France	Paris	66 avenue d'lena
Other	Germany	Berlin	Reichpietschufer 20
Other	India	Chennai	No: 11, Taramani Main Road, Taramani
Other	India	Chennai	Block 3, 11th Floor, SP Infocity , Kandanchavadi
Other	India	Chennai	Unit 601, Block 4B, RMZ Millenia Business Park Kandhanchavadi
Other	India	Chennai	Unit 602B, Block 4B, RMZ Millenia Business Park Kandhanchavadi
Other	Italy	Rome	Via Labicana 110
Other	Japan	Tokyo	10th Floor, Fukoku Seimei Building, 2-2-2 Uchisaiwai-cho, Chiyoda-ku

Other	Switzerland	Geneva	7bis Avenue de la Paix
Other	United Kingdom	London	1 Tudor St, 6th floor, London
SAR	Afghanistan	Kabul	Kabul Street #15, House #238, Wazir Akbar Khan
SAR	Bangladesh	Dhaka	Plot E-32, Agargaon, Sher-e-Bangla Nagar
SAR	Bhutan	Thimphu	Lower Norzin Lam, BDFCL, PO Box 256 1st Floor, North End, Thimpu
SAR	India	New Delhi	55 Lodhi Estate
SAR	India	New Delhi	70 Lodhi Estate
SAR	India	New Delhi	The Hindustan Times House, 18-20 Kasturba Gandhi Marg, New Delhi 11000
SAR	Maldives	Male	4th Floor | Hotel Jen (Room 404) | Ameer Ahmed Magu
SAR	Nepal	Kathmandu	Yak & Yeti Hotel Complex, Durbar Marg
SAR	Pakistan	Islamabad	20 A Shahrah-e-Jamhuriyat, Ramna 5
SAR	Sri Lanka	Colombo	37th floor one Galle Face Tower, Centre Road, 1, Colombo
United States	United States	District of Columbia	C - 1225 Connecticut Ave NW
United States	United States	District of Columbia	G -1776 G St NW
United States	United States	District of Columbia	I - 1850 I St NW
United States	United States	District of Columbia	International Square - 1825 I St NW
United States	United States	District of Columbia	J - 701 18th St NW
United States	United States	District of Columbia	MC - 1818 H St NW
United States	United States	District of Columbia	N - 1899 Pennsylvania Ave NW
United States	United States	District of Columbia	U - 1800 G St NW
United States	United States	Landover, Maryland	LSC - 3301 Pennsy Dr
United States	United States	New York, New York	1 Dag Hammarskjold Plaza, 885 2nd Avenue, 26th Floor

United States	United States	Boyers, Pennsylvania	Archives - near Pittsburgh
United States	United States	McLean, Virginia	8350 Broad Street
United States	United States	Sterling, Virginia	Warehouse – Sterling (DCC)

APPENDIX F: UL360 COUNTRY OFFICE SURVEY SCREENSHOTS

Figure 14. UL360 Landing Page (example)

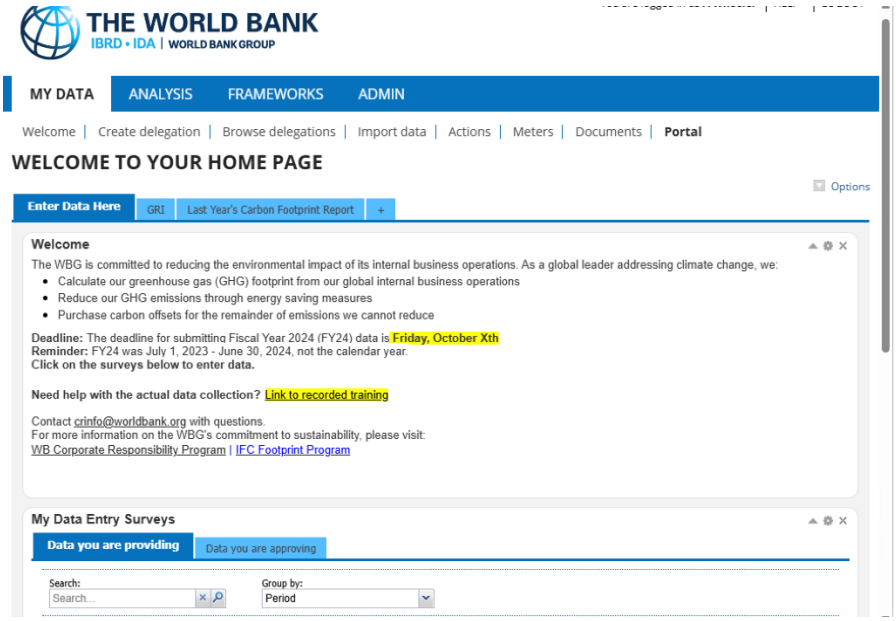


Figure 15. UL360 Office Utility Data Form (example)

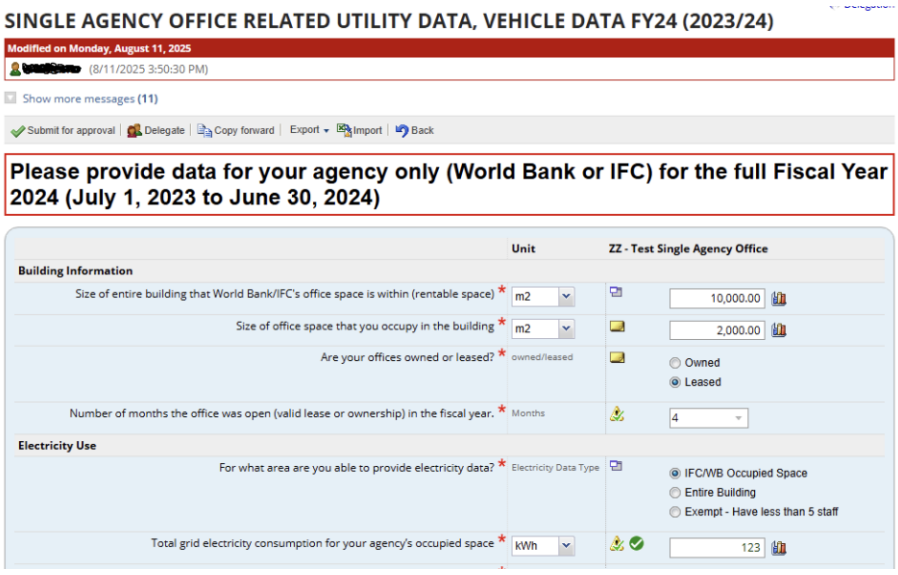
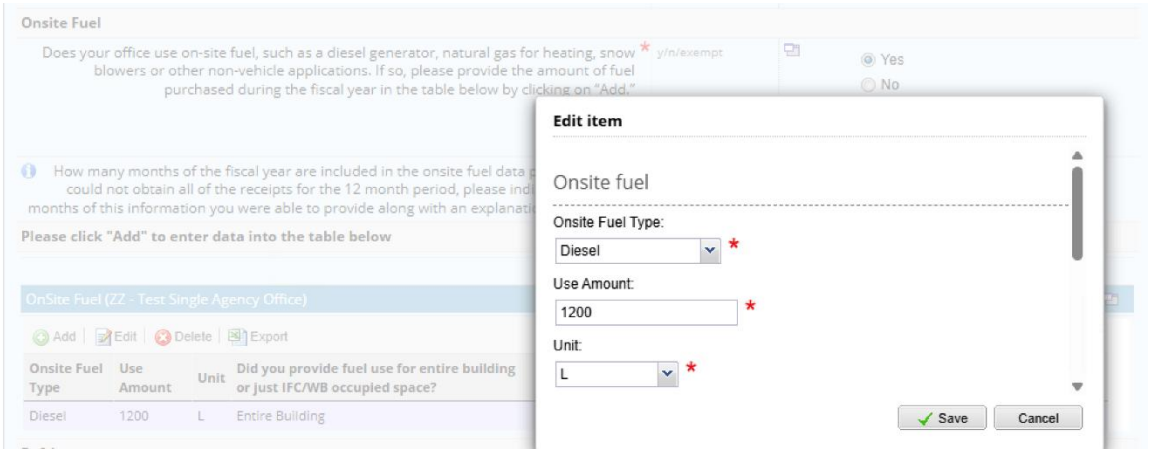


Figure 16. UL360 Stationary Combustion Data Entry (example)



APPENDIX G: AUTOMATIC THRESHOLDS WITHIN UL360

Indicator	Unit	Lower Threshold	Upper Threshold
Office			
Number of months at this property out of the last 12 months	Months		130%
Size of entire building that World Bank/IFC's office space is within (rentable space)	m2	100%	100%
Size of office space that you occupy in the building	m2	90%	110%
Onsite Fuel			
Onsite Fuel Use for Building (if office amounts are unknown)			
Amount of Diesel (stationary – building)	liters	50%	150%
Amount of Gasoline (stationary – building)	liters	50%	150%
Amount of LPG/Propane (stationary – building)	liters	50%	150%
Amount of Natural Gas (stationary – building)	Therms	50%	150%
Onsite Fuel Use for Office			
Amount of Diesel (stationary)	liters	50%	150%
Amount of Gasoline (stationary)	liters	50%	150%

Amount of LPG/Propane (stationary)	liters	50%	150%
Amount of Natural Gas (stationary)	Therms	50%	150%
Refrigerants for Office			
Amount of HFC-125 recharged	Pounds	50%	150%
Amount of HFC-134 recharged	Pounds	50%	150%
Amount of HFC-134a recharged	Pounds	50%	150%
Amount of HFC-143 recharged	Pounds	50%	150%
Amount of HFC-143a recharged	Pounds	50%	150%
Amount of HFC-227ea recharged	Pounds	50%	150%
Amount of HFC-23 recharged	Pounds	50%	150%
Amount of HFC-236fa recharged	Pounds	50%	150%
Amount of HFC-245ca recharged	Pounds	50%	150%
Amount of HFC-32 recharged	Pounds	50%	150%
Amount of HFC-41 recharged	Pounds	50%	150%
Amount of HFC-R404a recharged	Pounds	50%	150%
Amount of Other recharged	Pounds	50%	150%
Amount of R-11 recharged	Pounds	50%	150%
Total refrigerant recharged (from building)			
Total amount of HFC-125 recharged	Pounds	50%	150%
Total amount of HFC-134 recharged	Pounds	50%	150%
Total amount of HFC-134a recharged	Pounds	50%	150%
Total amount of HFC-143 recharged	Pounds	50%	150%
Total amount of HFC-143a recharged	Pounds	50%	150%
Total amount of HFC-227ea recharged	Pounds	50%	150%
Total amount of HFC-23 recharged	Pounds	50%	150%
Total amount of HFC-236fa recharged	Pounds	50%	150%
Total amount of HFC-245ca recharged	Pounds	50%	150%

Total amount of HFC-32 recharged	Pounds	50%	150%
Total amount of HFC-41 recharged	Pounds	50%	150%
Total amount of HFC-R404a recharged	Pounds	50%	150%
Total amount of Other recharged	Pounds	50%	150%
Total amount of R-11 recharged	Pounds	50%	150%
Refrigerants from Vehicles			
Total amount of HFC-125 recharged	Pounds	50%	150%
Total amount of HFC-134 recharged	Pounds	50%	150%
Total amount of HFC-134a recharged	Pounds	50%	150%
Total amount of HFC-143 recharged	Pounds	50%	150%
Total amount of HFC-143a recharged	Pounds	50%	150%
Total amount of HFC-227ea recharged	Pounds	50%	150%
Total amount of HFC-23 recharged	Pounds	50%	150%
Total amount of HFC-236fa recharged	Pounds	50%	150%
Total amount of HFC-245ca recharged	Pounds	50%	150%
Total amount of HFC-32 recharged	Pounds	50%	150%
Total amount of HFC-41 recharged	Pounds	50%	150%
Total amount of HFC-R404a recharged	Pounds	50%	150%
Total amount of Other recharged	Pounds	50%	150%
Total amount of R-11 recharged	Pounds	50%	150%
Road			
Biodiesel fuel consumed	Gallons	75%	125%
Diesel fuel consumed	Gallons	50%	150%
E85 Fuel consumed	Gallons	50%	150%
Gasoline fuel used	Gallons	50%	150%
LPG (vehicle) fuel used	Gallons	50%	150%
Other fuel used	Gallons	50%	150%

Residual fuel oil use	Gallons	50%	150%
Distance Driven by Vehicle Type			
Light truck	miles	50%	150%
Motorcycle	miles	50%	150%
SUV	miles	50%	150%
Sedan	miles	50%	150%
Fuel consumption by vehicle type			
Heavy truck	gallons	50%	150%
Hybrid	gallons	50%	150%
Large van	gallons	50%	150%
Light truck	gallons	50%	150%
Motorcycle	gallons	50%	150%
SUV	gallons	50%	150%
Sedan	gallons	50%	150%
Electricity Use			
Electricity consumption of office space	kWh	75%	125%
Electricity consumption of whole building	kWh	75%	125%

APPENDIX H: REPORTED EMISSIONS

*Note: In the tables below, the increase in Scope 3 and total emissions between FY19 and FY20 is due to the inclusion of a radiative forcing factor in air business travel and the addition of emissions from purchased food in headquarters starting in FY20. See sections under Scope 3: Business Travel Emissions and Food Procurement Emissions (Cool Food Pledge) for details.

**Note: From FY16 to FY23, the World Bank's Scope 3 emissions from air travel included those associated with World Bank, GEF, and MIGA. Beginning in FY24, the organizational boundary is applied more strictly. For air travel emissions calculation, only the World Bank is accounted in the World Bank's inventory, while the World Bank, IFC, and MIGA are accounted for in the World Bank Group's inventory. GEF Secretariat, though hosted by the World Bank, operates independently and is excluded from these inventories.

WBG GHG Scope Emissions in metric tons CO_2e	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Scope 1	9,749	10,540	10,530	8,118	9,406	7,287	5,561	5,774	8,464
Scope 2	56,516	55,136	53,550	52,078	45,512	36,333	36,402	36,890	35,537
Scope 1 and 2	**66,265**	**65,676**	**64,080**	**60,197**	**54,918**	**43,620**	**41,963**	**42,664**	**44,001**
Scope 3	119,156	126,852	133,290	136,408	175,689*	5,624	66,320	194,035	**215,803****
Total Emissions	**185,421**	**192,528**	**197,370**	**196,605**	**230,607***	**49,245**	**108,283**	**236,698**	**259,805**

*, ** See note above at start of section

World Bank GHG Scope Emissions in metric tons CO_2e	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Scope 1	6,970	7,818	8,490	7,114	8,348	6,317	4,539	4,748	7,269
Scope 2	46,031	45,120	43,663	42,654	36,843	29,059	29,016	29,462	28,548
Scope 1 and 2	**53,001**	**52,937**	**52,154**	**49,768**	**45,191**	**35,376**	**33,555**	**34,210**	**35,817**
Scope 3	90,046	95,216	102,139	106,053	138,392*	4,434	52,950	148,985	162,280**
Total Emissions	**143,047**	**148,153**	**154,293**	**155,821**	**183,583***	**39,810**	**86,505**	**183,195**	**198,096**

*, ** See note above at start of section

IFC GHG Scope Emissions in metric tons CO_2e	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Scope 1	2,778	2,722	2,040	1,005	1,058	970	1,022	1,026	1,195
Scope 2	10,485	10,017	9,886	9,424	8,669	7,275	7,386	7,428	6,990
Scope 1 and 2	**13,263**	**12,739**	**11,926**	**10,429**	**9,727**	**8,245**	**8,408**	**8,454**	**8,185**
Scope 3	29,111	31,636	31,151	30,355	37,297*	1,190	13,370	45,049	51,569
Total Emissions	**42,374**	**44,375**	**43,077**	**40,784**	**47,024***	**9,435**	**21,778**	**53,503**	**59,754**

*, ** See note above at start of section

APPENDIX I: MAJOR MEETINGS

The World Bank/International Monetary Fund Spring and Annual Meetings focus on a range of issues related to poverty reduction, international economic development, and finance. About 10,000 people attend the meetings each year, including on average 3,500 members of delegations from the institutions' member countries, roughly 1,000 representatives of the media, and more than 5,000 visitors and special guests drawn primarily from private business, the banking community, and non-governmental organizations.

Since FY15, the IMF has assumed responsibility for, and has offset through the purchase of Verified Emissions Reductions, the emissions associated with the delegates attending these biannual meetings. Any World Bank staff who attend these meetings book their travel, as needed, through AMEX, and those emissions are included in World Bank Scope 3 business air travel emissions.