



# 2016 KPMG environmental metrics and methodology

At KPMG LLP (U.S.), we are always focused on the long-term impacts of our decisions. That is why environmental sustainability is a core component of KPMG's Corporate Citizenship strategy.

Implementing environmentally sustainable principles, reducing our greenhouse gas (GHG) emissions, and addressing local environmental challenges add value for our clients and reflect the integrity and ethics of our professionals.

KPMG is proud of the success of our environmental sustainability initiatives. Between 2007 and 2010, we achieved a 22 percent reduction in gross emissions per full-time equivalent (FTE) employee. Between 2010 and 2015, we achieved a net 26 percent reduction per FTE. That number reflects a combination of factors, including an increase of employees, a decrease in office electricity usage, investments in renewable energy, and active management of our air and car travel.

In 2016, KPMG pledged to further reduce net emissions by 10 percent per FTE against baseline year 2016 and to purchase 100 percent renewable energy for our offices by 2020.

Since 2010, we have also championed sustainability by:

- Reducing office electricity by 32 percent
- Increasing our use of renewable energy to 37 percent of total consumption
- Increasing number of LEED-certified offices to 37
- Reducing paper consumption by 29 percent.

Air travel represents 66 percent of our carbon footprint and represents our biggest challenge in the years to come. KPMG works continuously to better manage travel and implement creative solutions to reduce environment impact by leveraging innovative technologies to reduce the need for travel and by sharing sustainable travel tips with employees to reduce their impact when they do travel.

## Greenhouse gas emissions for KPMG

### Fiscal year reporting

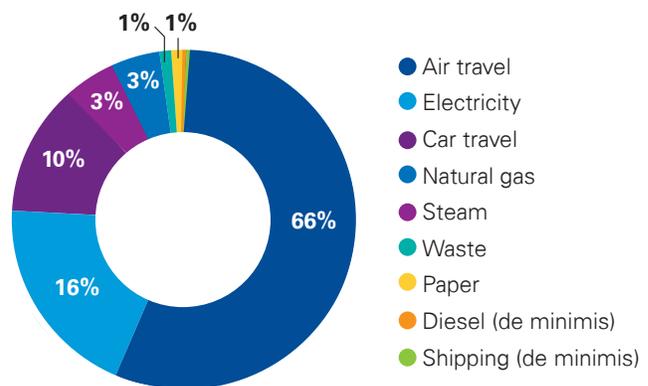
GHG emissions are reported in line with KPMG's fiscal year, which runs from October 1 through September 30. Prior to 2016, KPMG reported GHG emissions on a calendar year basis. This shift in reporting period brings KPMG LLP (U.S.) in line with KPMG International's reporting period.

### Emissions by scope

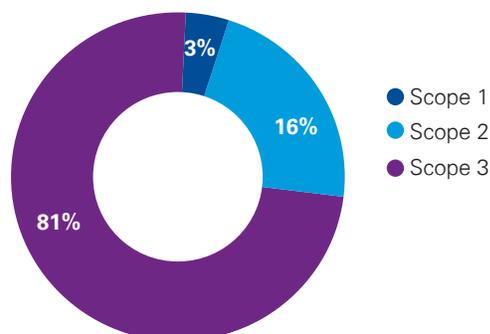
Since 2008, KPMG measured and reported on the volume of GHG emissions stemming from our yearly operations. GHG emissions are reported in CO<sub>2</sub> equivalent metric tons (MT CO<sub>2</sub>e) and are classified as:

- Scope 1 – "Direct" emissions: Emissions from diesel fuel and natural gas usage
- Scope 2 – "Indirect" emissions: Emissions from electricity and purchased steam consumption
- Scope 3 – "Other indirect" emissions: Air travel, car travel, shipping, waste, common space electricity in leased buildings, diesel used by leased buildings, and paper consumption.

### Carbon footprint by source



### Carbon footprint by scope



Below is a summary of KPMG’s 2016 environmental performance results.

<b>Emissions summary (in metric tons of CO<sub>2</sub> e)<sup>1</sup></b>	<b>2016</b>
<b>Scope 1 – Total</b>	<b>6,275</b>
Electricity – Solar	0
Natural gas	6,206
Diesel	69
<b>Scope 2 – Total</b>	<b>29,702</b>
Electricity	23,496
Steam	6,206
<b>Scope 3 – Total</b>	<b>150,001</b>
Air travel	122,178
Car travel	19,556
Shipping	76
Waste	1,311
Paper	1,030
Electricity	5,843
Diesel	7
<b>Total gross</b>	<b>185,978</b>
Renewables	(12,510)
<b>Total net</b>	<b>173,468</b>
<b>Net emissions per FTE</b>	<b>5.5</b>

Currently, most KPMG LLP (U.S.) offices participate in the environmental data collection process, with participating offices representing 97 percent of the U.S. firm’s head count. We apply proxy data to estimate emissions for the remaining offices to determine overall values across all KPMG LLP (U.S.) offices. National indicators along the lines of air travel, car travel, and paper usage are collected from our vendors and internal expense reimbursement systems and represent data for all offices.

As a global service-based organization, managing our environmental impacts begins by focusing on the key sources of our emissions and the greatest potential opportunities for reduction. In our office spaces, KPMG continually strives to be more efficient in the consumption of electricity by designing our offices to U.S. Green Building Council standard and investing in alternative energy sources, such as solar panels on our New Jersey campus, and procuring renewable energy in our offices.

Further reductions are also achieved through investments in high-efficiency lighting, flexible work space, ENERGY STAR office equipment and information technology (IT). We also utilize videoconferencing capabilities for internal meetings in place of air travel, which further reduces emissions related to travel. Employees receive incentives to use public transit, and energy-efficient vehicles are available.

<sup>1</sup> Due to rounding, reperforming the calculations given in the equations may not return the exact results shown.

Environmental management efforts are not limited to reducing carbon emissions. Additional opportunities to promote environmental sustainability are also sought, including reduction of paper and water consumption by implementing solutions such as EPA WaterSense fixtures, a green meeting tool kit, and promoting periods without printing. KPMG’s IT suppliers have also been engaged to help manage electronic waste; KPMG offices have instituted rigorous recycling programs; and several offices have even begun composting.

## Data collection, consolidation, and methodology

KPMG coordinates the data collection and consolidation across the United States to calculate the U.S. firm’s carbon footprint. In 2008, the initial year of data collection, KPMG LLP (U.S.) worked with KPMG International to design and implement a global methodology based upon the Greenhouse Gas Protocol Corporate Standard to guide global KPMG member firms and promote a consistent approach.

### Methodology

KPMG reports GHG emissions in MT CO<sub>2</sub>e. GHG emissions are calculated for the following environmental parameters: electricity, energy fuel use, solid waste, shipping, air and car travel, and paper. Calculations are determined by multiplying the environmental indicator’s activity data with specific relevant emission factors. KPMG follows the GHG Protocol Corporate Standard (2015 update) developed by the World Resources Institute and the World Business Council for Sustainable Development. All applied emission factors have been derived from sources, guidance, and methodologies referenced in that protocol. Final emission factors measure the carbon dioxide equivalent (CO<sub>2</sub>e) of combined GHGs (carbon dioxide, nitrous oxide, and methane gas) and have been converted to the necessary unit of measurement for reporting purposes.

### Air travel

Air travel emissions are determined by applying an emission factor to total traveled flight distances. Air travel emission factors are sourced from the U.K. Department of Food and Rural Affairs (Defra). Emissions are categorized by flight distance (short haul: up to 500 kilometers, medium haul: 501-1599 kilometers, and long haul: over 1,600 kilometers) and then by class of travel.

In 2013, Defra expanded air travel emission factors to include emissions related to both “uplift” and “radiative forcing.” “Uplift” represents a mileage buffer to account for indirect flight routes, delays, and circling. Defra air travel emission factors now include an 8 percent “uplift” factor to capture these inefficiencies in air travel.

“Radiative forcing” or RF captures the impact of releasing combustion emissions and water vapor in the stratosphere. Combustion emissions and water vapor released in the upper atmosphere have a significant and additive impact over similar emissions at lower altitudes. Inclusion of the RF factors increases total air-travel-related emissions by 87 percent.

For FY 2016, KPMG began using the 2016 Defra air travel emission factors inclusive of the RF value. The impact was significant. KPMG’s total air travel in absolute distance increased by only 2 percent and decreased by 13 percent on a per FTE basis. However, due to the change in the air travel emissions factor, KPMG’s air travel emissions increased 88 percent.

## Energy

Energy consumption data (including electricity, natural gas, and fuel used directly for electricity and heating) is collected by local offices based on invoices and, where available, on-site meters. The most accurate emission factor available at the collection date is applied for each office. Most KPMG offices are located in leased buildings shared with other tenants. In offices where separate metering is not available, estimates are used for electricity, heating, and cooling based upon the leased floor space. In addition, where applicable, energy consumption associated with common areas, such as lobbies, cafeterias, and elevators, is also included and reported as Scope 3.

## Electricity

Electricity emissions are calculated based on invoiced and estimated consumption values for space under KPMG's direct control. To calculate emissions, KPMG utilized localized emissions factors (kilogram (kg) CO<sub>2</sub>e per kilowatt hour (kWh)) for each KPMG office based on the U.S. Environmental Protection Agency's (EPA) Emissions & Generation Resource Integrated Database or eGRID subregions. The EPA eGRID program determines regional emissions factor based on the area's generation mix and usage. For consistent comparison purposes, KPMG used the U.S. EPA eGRID subregion Emissions – Greenhouse Gases (2014 data).

KPMG also calculates emissions associated with common space electricity consumption in its leased offices. Common space electricity emissions are calculated using consumption data provided by the property manager or estimated utilizing an apportioned share of the common space derived from KPMG occupancy as a percentage of the entire building. Common space electricity emissions are calculated using the U.S. EPA eGRID subregion emissions factors.

## Natural gas

Natural gas is used primarily for heating and to lesser extent for energy generation. Natural gas emissions are calculated based on invoiced and estimated consumption values. To calculate emissions, KPMG applied an emissions factor from the GHG Protocol for the stationary combustion of natural gas.

## Diesel

Diesel fuel is used to run and test backup generators in our data center (these emissions are reported as Scope 1 emissions) and is used by property managers of our leased offices (these emissions are reported as Scope 3 emissions). Consumption data is provided by the local offices. To calculate emissions, KPMG applied an emissions factor from the GHG Protocol for the stationary combustion of diesel fuel.

## Car travel

Emissions from vehicles of KPMG employees are included when incurred for business-related travel, excluding their normal commute. Emissions from rental cars, car share services, taxis, and black cars are also included and determined through the application of a national vehicle emissions factor to the number of miles traveled.

Reimbursed employee miles are sourced by the firm's expense reimbursement system. Actual rental and car service travel distances were not available. Mileage was determined based on the number of trips. An average distance of 56 miles per rental trip (based

on data from KPMG's third-party travel services provider) and 13 miles per trip for taxi trips (based on a Schaller urban transportation study). To determine the car travel emissions, the aggregate sum of reimbursed, rental, and taxi mileage was multiplied by a GHG Protocol emissions factor for mobile sources (version 2.3), which assumed gasoline-powered vehicles manufactured after 2005.

## Renewable energy

KPMG's green power purchases are sourced from a variety of renewable energy technologies, are Green-e Energy certified, and meet EPA Green Power Partnership and leadership in energy and environmental design (LEED) requirements. Renewable environmental certificates (RECs) are generated at U.S.-based projects that are geographically diverse and from specific and known renewable energy installations not older than 10 years. The kWh purchased specifically for renewable energy is listed under renewable energy purchases and the 2014 U.S. eGRID national average emission factor was applied. These emissions have been subtracted from the firm's "gross emissions" to reach the "net emissions" total. In 2016, KPMG made a commitment to 100 percent renewable energy by 2020.

## Solar energy

Solar electricity is generated by a KPMG-owned 500 kWh solar installation at KPMG's Montvale, New Jersey campus. However, no environmental benefits for solar energy generation are claimed by KPMG, as the generated solar RECs (SREC) were sold into the SREC market.

## Waste

Waste to landfill volumes are collected at an office level based on invoices, where available. Again, for offices in leased buildings shared with other tenants, separate office-level invoices may not be available, thus estimates were made for KPMG's waste volume based on the amount of leased floor space. Emissions are calculated based on the most recent average emission factor for general municipal solid waste from the U.S. EPA Waste Reduction Model.

## Paper

KPMG's annual paper consumption data is provided from our procurement department and includes all types of paper consumed in our offices (such as letterheads, envelopes, business cards, printing, and report paper). It does not include the usage of paper by external vendors printing on KPMG's behalf. GHG emissions are calculated with the help of an average emission factor for 100 percent virgin postconsumer paper composition derived from the Environmental Defense Fund's Paper Task Force Report. While KPMG's paper policy is to procure 30 percent recycled content for general printer and copy paper, an emission factor for 100 percent virgin postconsumer paper is used as a conservative value.

## Shipping

We retrieve the total annual weight of KPMG's shipped items from our third-party vendors. When calculating emission levels due to freight transportation, an average transport distance of 630 kilometers (390 miles) was assumed. KPMG then applied an emissions factor from the GHG Protocol for domestic freight. The emission factor assumes that all shipped items are transported in domestic freight transport in unknown road vehicle types and unknown fuel sources.



### Steam

Purchased steam emissions are calculated based on invoiced consumption values for space under KPMG's direct control. To determine the purchased steam emissions, the consumption values were multiplied by a purchased steam emissions factor provided by the U.S. Energy Information Administration's Voluntary Reporting of Greenhouse Gases Program.

### FTE calculation

FTE information is provided by KPMG's Human Resources department and excludes temporary employees, interns, inpatriates, and expatriates. The FTE figure is the average ending head count for the months between October and September.

### Other environmental data

In addition to the emissions data noted above, KPMG collects data on several other environmental performance indicators, including water consumption, videoconferencing, recycling, and composting. We expect to report on several of these environmental performance indicators in the future.

### Assurance

External assurance at the U.S. and at a global level was not obtained for the 2016 emissions data. However, an internal assurance process was applied each year, consisting of an independent review of data by a national emissions collection team. In addition, KPMG conducted a separate internal assurance process performed by professionals from KPMG's Sustainability Advisory Services. We continue to evaluate the assurance process, including options for external assurance in the future.

### Baseline adjustments

Occasionally, the firm obtains more accurate information related to a prior year that was not previously available and, where appropriate, we update prior-year information to represent the most accurate information. As this year's data represents a new baseline, baseline changes are not applicable for the current period.

For more information, please contact Darren McGann, associate director of Environmental Sustainability, at [us-green@kpmg.com](mailto:us-green@kpmg.com).

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