



## Carbon methodology

*Our greenhouse gas (GHG) footprint is calculated using a detailed and documented methodology.*

### Calculating our footprint

#### Standards:

We use the following standards in calculating emissions, as relevant:

- World Resources Institute/World Business Council for Sustainable Development (WRI/WBCSD) GHG Protocol
- US Environmental Protection Agency (EPA) standards
- US Energy Information Administration’s (EIA’s) Commercial Buildings Energy Consumption Survey (CBECS)
- Environmental Paper Network Paper Calculator
- World Travel & Tourism Council and International Tourism Partnership Hotel Carbon Measurement Initiative (HCMI)

As a best practice, we continue to monitor other GHG reporting standards, such as the UK Department for Environment, Food and Rural Affairs (DEFRA).

These standards include assumptions about the composition of GHGs in various kinds of emissions. While the vast majority of our GHG emissions are CO<sub>2</sub>, our calculation also includes other GHGs, for example, CH<sub>4</sub> and N<sub>2</sub>O from car exhaust fumes. We report in carbon dioxide equivalent (CO<sub>2</sub>e), which accounts for these other GHGs.

#### Baseline:

The baseline year for our GHG footprint is FY07 (July 1, 2006–June 30, 2007). Due to changes in our methodology, we have adjusted our baseline emissions numbers and, in turn, our calculation of progress toward our 2020 45% emissions reduction target.

#### Scope and normalization:

Our GHG footprint calculation is currently based on operational control within the US only and includes the WRI/WBCSD Scopes 1, 2 and 3 as described below. Our GHG intensity ratio calculation includes Scopes 1, 2 and 3. The denominator is full-time equivalent (FTE) employees, a measure of the number of people we employ. As a professional services firm, our emissions are driven by the activities of our employees in the delivery of their professional duties, so this is the most relevant factor by which to normalize our emissions.

#### Reporting categories:

Beginning in FY17, we realigned the way we categorize and report our emissions with the way that we work in order to better communicate our areas of impact to our staff and other stakeholders. The following maps our new categories to the WRI/WBCSD GHG Protocol scopes. Notes on how we calculate emissions by scope follow.

Category	Activities	WRI/WBCSD Scope
Delivering work in the office	Energy and resources we use in our PwC offices and workspaces, including office energy use and paper purchased.	Scopes 1 and 2, Scope 3 emissions associated with paper purchases
Getting around	How we commute to the office or travel to meet our clients’ needs, including air travel, employee commuting (personal car/mass transit), reimbursed mileage and ground transport (taxis, trains, black/town cars).	Scope 3
Delivering work outside of the office	Energy and resources consumed in spaces we use when we are away from the office, including energy use in hotels and non-PwC meeting space.	Scope 3

## Scope 1

We have very limited direct (Scope 1) emissions, which are primarily related to the use of diesel fuel for backup generators and the consumption of natural gas and fuel oil in our workspaces. Where we do not have actual activity data, we use EIA's 2012 CBECS to estimate our natural gas and fuel oil consumption.<sup>1</sup>

## Scope 2

Our Scope 2 emissions are the result of the use of purchased electricity and heat in our workspaces. We currently include all US-based operations. We lease nearly all of our workspaces and are working to determine the effective mix of submetering solutions and lease provisions we can employ to generate data more useful to our efficiency efforts. In the interim, where we do not have actual activity data, we use EIA's 2012 CBECS to estimate our indirect electricity and heat consumption.

The emission factors for our workspace emissions are sourced from the following: US EPA's Emissions & Generation Resource Integrated Database (eGRID) with respect to purchased electricity and US EPA's Emission Factors for Greenhouse Gas Inventories (November 2015) with respect to other fuels.

As part of our strategy to reduce GHG emissions, we invest in renewable energy and carbon offset projects. In FY17, we purchased renewable energy certificates (RECs) to match our total electricity usage with the equivalent number of RECs in megawatt hours (MWh). The RECs, from wind energy projects across the country, are certified by Green-e Energy. In addition, we invested in forest conservation projects in Belize, which lowered our overall GHG emissions by 50,000 metric tons CO<sub>2</sub>e.

## Scope 3

Our emissions encompass the following:

- **Air travel:** Carbon emissions from fuel consumption related to commercial airline flights, including domestic travel and international travel. Total carbon emissions for each flight are calculated based on the aircraft type, fuel burn rates and total flight mileage. The flight's total carbon emissions are then divided between passengers and cargo and allocated to each seat using the seating configuration of the flight. First and business class seats are allocated a higher proportion of the emissions to reflect the larger seat size.

- **Employee commuting by personal car and mass transit:** Carbon emissions from fuel consumption related to PwC US employees' travel from home to our offices, based on employee responses to a periodic voluntary survey. We collected commuting data in FY15 from 21% of our partners and staff and then extrapolated that out to our FY17 headcount to calculate FY17 commuting emissions. We will be evaluating employee commuting in the coming year (FY18).
- **Reimbursed miles:** Carbon emissions from fuel consumed by PwC US employees traveling for business purposes using personal cars.
- **Paper in workspace:** Carbon emissions from energy consumed in manufacturing, distribution, use and disposal of paper used in PwC US offices and data centers.
- **Additional Business Travel:** Actual carbon emissions of PwC US employees' business travel when available, as well as those associated with categories that are tied to the number of FTE employees. This category includes the following activity types:

### Travel and accommodations calculated in FY17 based on actuals:

- Auto travel: Rental cars
- Hotels: Transient (individuals/small groups)
- Hotels: Group (hotels for larger groups)
- Meetings: Hotels
- Meetings: Alternate venues

### Travel and accommodations estimated in FY17 based on FTE:

- Auto travel: Black/town cars
- Mass transit: Taxis
- Mass transit: Trains

<sup>1</sup> For FY16, our energy intensity factors are based on the 2012 CBECS data, newly available in FY16. For FY15 and prior years, our energy intensity factors are based on the 2003 CBECS data.

In FY11, we reviewed the first four years of results and concluded that Additional Business Travel (Scope 3) items we calculate had a cumulative impact of less than 10% of our footprint. We therefore decided not to calculate an actual footprint for all of these items every year, but rather estimate them in intervening years based on past actual measurements, adjusted by changes in annual FTEs. At least every four years, we recalculate an actual footprint for these items based on new data where available, at which point we determine whether there has been a change in their relative impacts and therefore a need to recalibrate our methodology, provide actual data more frequently or refocus our strategy. To this end, we performed actual calculations in FY17 for many business travel activities categories in order to reflect best practices and continually improve our data. For example, we recalculated our meeting and hotel emissions by adopting the industry standard for measuring hotel and meeting emissions based off of the HCMI. As a result, we restated our 2007 baseline using this new methodology and also adjusted selected subsequent annual carbon performance numbers.

We also excluded a small number of emissions activities that were deemed immaterial from our reporting scope (totaling < 0.5% of total emissions). These were transportation to meetings, printed materials, buses and toner for our printers. This approach allows us to direct our efforts to the most significant drivers of our footprint.