This CO2 Emissions Reporting Guidance ("CERG") document supports the preparation and reporting of carbon dioxide emissions data by HSBC Holdings plc (hereafter "HSBC"). It is the responsibility of HSBC management to ensure that appropriate procedures are in place to prepare its carbon reporting is in line with, in all material respects, the CERG. HSBC has:

- signed, implemented and maintained internal controls and processes over information relevant to the measurement and preparation of carbon emissions data that is free from material misstatement, whether due to fraud or error;
- established objective reporting criteria for measuring, preparing and reporting the carbon emissions data and applied them consistently;
- presented information, including the criteria, in a manner that provides relevant, reliable, comparable and understandable information;
- measured and reported the carbon emissions data based on the reporting criteria.

General Reporting Principles

In preparing this guidance document consideration has been given to following principles:

- Information Preparation – to highlight to users of the information the primary principles of relevance and reliability of information;
- Information Reporting – the primary principles are comparability / consistency with other data including prior year and understandability / transparency providing clarity to users.

Reporting Scope

Since 2013, HSBC’s annual data is prepared for the 12 month period to 30 September in accordance with internal reporting timelines. Carbon emission data comprises carbon dioxide arising from:

- Energy used in commercial buildings, vehicles and other forms of transport owned or leased by HSBC and used for business purposes. By applying an emission uplift rate, energy used in residential building is also accounted for. This includes 100% of emissions from the assets of joint ventures or alliances where HSBC has management control1;
- Emissions arising from off-shored operations where HSBC retains control over the outsourced operation via contractual agreement; and
- Other business travel including air; rail; hired motorbike; taxi; hire car. By applying an emission uplift rate, elements of boat; bus/coach; ferry/junk; tram; and other travel are also included.

Carbon dioxide emissions from acquisitions and disposals are included and terminated respectively from the date of contractual completion of the transfer of asset ownership/leasehold. This is consistent with HSBC’s financial reporting. For acquisitions, where data are not available: estimates are prepared for additions which contribute more than 5% of the Reporting Unit (i.e. country level) annual data. Reporting levels are defined on the basis of the percentage of Full Time Equivalent Employee (FTE) as at 30 September (reporting year runs from 1 October to 30 September). A scale up calculation is made on the basis of the FTE coverage rate to account for any missing data component (typically less than 10% of FTE). In addition, emissions uplift rates are applied to allow for uncertainty on quality and coverage of emissions measurement and estimation. The uplift rates are: 4% for electricity, 10% for other energy, and 6% for business travel, based on IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories and HSBC’s own internal analysis of data coverage and quality.

Carbon dioxide emission reporting excludes emissions from investments (including loans to third party organisations), employee commuting and other third party sources. It also excludes carbon equivalent emissions arising from other greenhouse gases on the basis that these are negligible and/or cannot be calculated with a sufficient level of reliability, however, CO2e factors were used wherever available, in which case elements of other greenhouse gases would have been included in total emissions.

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1 Management control: where HSBC Group or its member has full authority to implement the Group environmental policy and where there is control of facilities management.
Further details on the preparation of emissions reported are presented below.

**Data preparation**

**Property**

Data are reported for electricity, primary fuel sources and locally generated energy sources. Energy consumption data where possible are obtained via meters and collated from the service provider invoices. Where metered data are only partially available or not available, energy consumption may be calculated on the basis of a comparable property, extrapolation of cost per unit or estimates using floor area or other published industry baselines.

**Travel**

For air and rail travel, actual data are obtained where possible, from the business travel service agents. Where journey details are not available, estimates of distance travelled are based on the cost of an average journey or by extrapolating from a single month of travel. Where tickets are ordered on a local basis through a travel company an estimated distance of the journey may be made by the traveler/claimant. For independent bookings the estimate of distance travelled is based on the cost of an average journey.

Road travel is measured by direct measurement of journeys made for business purposes. Details of road journeys, including distances travelled, engine size of vehicle and fuel type are submitted as part of expense claims/invoices. This may include company vehicles, personal/private vehicles and hire vehicles. Where only cost data are available, an estimate of distances travelled can be calculated on a local basis. Where journey data are not available, previously recorded data or industry baseline data may be used.

**Conversion factors**

Conversion factors enable determination of the amount of carbon dioxide released into the atmosphere per unit of energy consumption. Different types of energy source and modes of travel have different conversion factors reflecting the carbon intensity.

**Scope 1**

Scope 1 emissions are calculated using factors provided by the Department for Business, Energy and Industrial Strategy (BEIS) for each primary fuel source.

**Scope 2**

HSBC reports energy emissions under the location and market basis introduced by the revised scope 2 guidance of the GHG protocol. HSBC has reviewed the revised Greenhouse Gas Protocol Scope 2 Guidance and has worked with service providers in 2016 to integrate the revised GHG Protocol Scope 2 Guidance into HSBC’s reporting methodology to enable HSBC to report using both location based and market based methodologies.

**Market Based**

For market based emissions reporting, HSBC apply the following hierarchy of emission factors:

1. Factors provided by electricity attribute certificates or equivalent instruments;
2. Factors provided by Contracts for electricity, such as power purchase agreements (PPAs);
3. Factors provided by energy suppliers;
4. Factors provided by the Association of Issuing Bodies (AIB) for the residual mixes in Europe;
5. Other grid-average emission factors (subnational or national);
6. Factors provided by the International Energy Agency (IEA).

**Location Based**

For location based emission reporting: HSBC apply the following hierarchy of emission factors:

1. Regional or subnational emission factors;
2. National production emission factors;
3. Factors provided by the International Energy Agency (IEA).

**Scope 3 – Travel**

For travel, factors provided by the transportation services suppliers or from published sources of the countries where the kilometres are travelled.

UK emissions from energy adhere to the below specific criteria:

- From Q4 2013, we switched from DEFRA’s 5-year grid rolling average emission factors to BEIS/DEFRA’s 1-year grid average emission factors;

 Guidance on the use of conversion factors, including the most recent factors released by the IEA and DEFRA is issued internally bi-annually.

**Prior year adjustments**

The measuring and reporting of carbon emissions data inevitably involves a degree of estimation. In exceptional circumstances restatements of prior year reported emissions and offset data may be required. Restatements are considered where there is a change in the data that will have material impact on the total emissions and/or offset at Group level.

Following the release of the revised GHG Protocol Scope 2 Guidance, we have revised our methodology for calculating carbon emissions to use the state-specific eGRID emission factors for our US operations until such time as we obtain supplier-specific emission factors. We have re-stated our comparatives for 2014.