

CE ELECTRIC UK CARBON FOOTPRINT 2008

CE Electric UK is publishing its carbon footprint for 2008. This note sets out the basis on which the company's carbon footprint has been calculated, compares the figure for 2008 with the equivalent figure for 2007 and explains the scope and exclusions from the calculation.

Organisational boundary

The carbon footprint has been calculated for CE Electric's regulated distribution businesses, NEDL and YEDL, together with its headquarters activities. It excludes the activities of its engineering contractor subsidiary, Integrated Utility Services.

Method

The methodology used for preparing, converting and reporting the data is in line with the GHG Protocol Corporate Accounting and Reporting Standard 2004 and published DEFRA GHG Conversion Factors. In future, conversion to tonnes of CO₂ will be made by means of the latest DEFRA conversion factors at the beginning of the year in question, in order to avoid the need for frequent recalculation. Both the 2007 and 2008 figures in this paper have been calculated using the DEFRA conversion factors available in April 2008.

The data for 2007 has been subject to external verification and the verification statement is attached. A number of recommendations were made to the business to improve and document the data collection systems which we will be implementing during 2009. Two discrepancies were noted in the verification report. The first which related to fleet fuel consumption has been rectified in the figures reported in this note, resulting in an increase of 908 tonnes of CO₂. Although this change was not subject to re-verification, we intend to subject the 2009 data to external verification following implementation of recommendations. The second discrepancy related to the potential under reporting of SF₆ losses which will also be rectified in future years.

Scope

The data included is as follows:

Category 1 Direct GHG Emissions (from sources that are owned or controlled by the company)

- Business vehicle fuel consumption;
- Sulphur hexafluoride losses from equipment;
- Business mileage by car users.

Category 2 GHG Indirect Emissions (from energy imported energy products)

- Electricity purchased and used by business premises;
- System losses from the NEDL and YEDL distribution network.

Category 3 Other Indirect GHG Emissions (not owned or controlled by the company)

- Business public transport by train and air;
- Contractors and suppliers are not included;
- Other category 3 emissions are not included such as commuting or waste.

By far the largest contribution to the company's carbon footprint is system losses in our electricity network. About four fifths of this is loss of electricity as heat in wires and transformers and the remainder is units unaccounted for through differences in meter readings etc. This number is the difference between two much larger figures. The first is the quantity of electricity entering our network from the national transmission system and from electricity generation connected directly to our network. This information is effectively available in real time and its accuracy is only limited by the accuracy of the metering equipment (around 5%). The second is the amount of electricity consumed by customers connected to our network. This figure is obtained through the national electricity industry settlement system. Because domestic meters are only read periodically, this figure contains a substantial amount of estimation initially. Subsequent corrections are made at intervals up to 14 months after the month in question, but the changes are made to later months' figures rather than amending the original data. For this reason, system loss figures cannot be relied on as an accurate measure of units lost other than when averaged over a significant time period. Because of the unusual nature of this component of our carbon footprint, we also report on our "business carbon footprint", which excludes this element.

Exclusions

Gas is used for heating at four sites. The figures have not been included for either 2007 or 2008, but the overall impact is not believed to be material. These figures will be included in future years.

Whilst business mileage in cars in the Car Ownership Scheme has been included, business mileage in vehicles owned by employees has not been included. An assessment will be made during 2009 of the materiality of this figure.

Fuel oil purchased to fill mobile generators was not included for 2007, although it was included for 2008.

Business travel by bus, taxi and ferry has not been included, but is believed not to be material.

Refrigerant gas loss from air conditioning units has not been included. The amount is not believed to be material.

Fuel oil used in leased generators and purchased by the leasing company is beyond the scope of this exercise, but will be investigated in future.

Results

The detailed data and conversion is available at Annex 1. In summary, the make up of our carbon footprint for 2007 and 2008 is as follows:

	2008 (tonnes CO2 or equivalent)	2007 (tonnes CO2 or equivalent)
Building energy use	3,318	3,520
SF6	81	177
System losses	1,141,127	1,176,259
Fleet fuel use	5,878	5,763
Business car use	2,437	2,495
Business air and rail	79	60 (excluding CEES) ¹
Total carbon footprint	1,152,920	1,188,275
Total business carbon footprint (excluding system losses)	11,793	12,015

¹ CEES refers to CE Electric Services Ltd, a subsidiary of CE Electric UK, which reported separately in 2007.

The company's total carbon footprint in 2008 has reduced by 3.0% compared to 2007, but this is dominated by system losses where the figures depend on settlement data and are only reliable as a measure of physical losses over an extended period. The company's business carbon footprint has reduced by 1.8%, with the major contribution coming from reduction in building energy use offset by an increase in fleet fuel use.

Annex 1

CARBON FOOTPRINT REPORTING		2008				tonnes CO2		
TOPIC		2008	2007		conversion figure	2008	2007	Percentage change
Building energy use		6,344,480	6,729,954	kwh	0.000523	3,318.16	3,519.77	
SF6	Northern	2	1	kg	23.9	38.24	14.34	
	Yorkshire	2	7	kg	23.9	43.02	162.52	
System losses		2,181,888	2,249,062	MWh	0.523	1,141,127.42	1,176,259.43	
Fleet fuel use	diesel	2,204,824	2,181,934	litres	0.0026304	5,799.57	5,739.36	
	petrol	14,723	10,603	litres	0.0023154	34.09	24.55	
	gas oil	16,708		litres	0.002674	44.68	0.00	
	lpg	58		litres	0.001495	0.09	0.00	
Business car use	diesel	3,321,824	3,637,739	miles	0.000319777	1,062.24	1,163.26	
	petrol	4,076,200	3,948,589	miles	0.000337158	1,374.32	1,331.30	
Business air and rail travel	air - long haul	215,395	201,844	miles	0.000185235	39.90	37.39	
	air - medium haul	32,487	2,260	miles	0.000228688	7.43	0.52	
	air - domestic	14,235	11,408	miles	0.000277129	3.94	3.16	
	rail	282,303	196,759	miles	9.68825E-05	27.35	19.06	
Total carbon footprint						1,152,920	1,188,275	-3.0
Business carbon footprint						11,793	12,015	-1.8

CE Electric UK Carbon Footprint Verification Report for 2007

Date of Verification: Feb – March 2009

Assessor: Marek Bidwell BSc, MSc, MIEMA, IEMA Registered Environmental Auditor

Locations: Shiremoor, Manor House, Kepier, Castleford

1. Verification Statement

Bidwell Management System (BMS) was commissioned by CE Electric UK to undertake an independent verification of the greenhouse gas emissions (GHG), or business carbon footprint, of its two distribution network operating businesses, NEDL and YEDL, for the calendar year 2007. This was the first year for which GHG emission data was collected and reported.

Between February and March 2009, BMS:

- i. Reviewed information and data presented in the 2007 GHG emission report for relevance, consistency, transparency, accuracy and completeness in line with the principles of the GHG Protocol Corporate Accounting and Reporting Standard;
- ii. Reviewed the company structure, reporting mechanisms and procedures;
- iii. Ensured the conversion factors used in calculating CO₂ emissions are in line with published DEFRA GHG conversion factors;
- iv. Reviewed the accuracy of spreadsheets used to record and collate data;
- v. Sampled source documents wherever possible, such as expense claims and utility bills;
- vi. Interviewed all key personnel at a variety of sites responsible for provision, collation and conversion of the information;
- vii. Provided this verification statement and a detailed management report with recommendations for improvement in future years.

It was found that CE Electric UK has taken positive steps towards establishing its carbon footprint for NEDL and YEDL, covering Scope 1 and 2 emissions and certain Scope 3 emissions. Sources of data have been identified, reporting responsibilities delegated to personnel and appropriate conversions made.

The majority of data reported was verifiable with a high degree of confidence representing more than 90% of the total carbon footprint of 11,107 tonnes CO₂e, excluding system losses.

Accuracy

Two discrepancies were identified associated with Sulphur Hexafluoride (SF₆) losses and fleet fuel consumption which combined may represent a material discrepancy of between 5%¹ and 10% of the total carbon footprint, excluding system losses.

A number of other specific, non-material recommendations are made in the internal management report for improving the accuracy of specific data streams.

¹ For the purposes of this verification a materiality threshold has been set a 5% of the total business carbon footprint, excluding system losses. System losses are excluded because they dwarf the conventional business carbon footprint.

Completeness

Generally, the data included all Scope 1 and 2 emissions likely to be over the materiality threshold and certain stated Scope 3 emissions. It is recommended that known exclusions are itemised in the public report. A number of specific recommendations are included in the internal management report for the inclusion of readily obtainable data, such as the very limited gas consumption in future years.

Consistency

A documented system to cover the institutional, managerial, and technical arrangements for collection of the data, preparation of the GHG emission inventory, and steps to manage the quality of the inventory has not yet been developed. However, the people within the business responsible for the provision of each set of data have been identified and documented within the Environmental Management System.

It is recommended that a GHG quality management system that can be fully integrated into the existing Environmental Management System be established. A number of specific recommendations are included in the internal management report for improving the consistency of specific data streams.

Transparency and Reporting

As this is the first year of compiling the GHG data, the company has not yet developed the final format in which the GHG data will be presented externally (public GHG report), along with a report context and therefore this was not reviewed. However, the data has been collected in a way that will allow differentiation between Scope 1, 2 and 3 emissions and system losses. It is recommended that the report is prepared in line with chapter 9 of the GHG Protocol Corporate Accounting and Reporting Standard, explains organisational boundaries, scope, and exclusions; and includes this Verification Statement.

This verification statement is supported by an internal management report detailing a range of opportunities for improvement.

Marek Bidwell BSc, MSc, MIEMA, IEMA Environmental Auditor

Bidwell Management Systems

11th March 2009