



BUSINESS CARBON

FOOTPRINT

Annual Report for 2013

SP Distribution and SP Manweb

Business Carbon Footprint Report 2013 SP Distribution and SP Manweb

Introduction

This report sets out SP Energy Networks' Business Carbon Footprint statement for 2013/14 for the two electricity distribution licensees - SP Distribution and SP Manweb - in accordance with Ofgem's guidelines.

In 2010, Scottish Power set out a framework for forward environmental targets, this sets out a 20% target for reduction of carbon emissions in coming years. Looking ahead to the next regulatory year, by 2023 we plan to reduce our Business Carbon Footprint (BCF) for scope 1 and 2 emissions by 15% against a 2013 baseline. Please see our RIIO ED1 business plan for further details.

Group Structure and Commitments

SP Energy Networks is the ScottishPower organisation responsible for the licensed Transmission and Distribution networks in Central and Southern Scotland, Merseyside and North Wales. The network licensees involved are;

SP Manweb plc
SP Distribution plc
SP Transmission plc

All of the above companies are members of the Scottish Power group which in turn is part of the Iberdrola SA group of companies.

SP Energy Networks adopts ScottishPower's environmental policy and environmental management system which are integrated into those of the Iberdrola Group. In addition to this, the companies have adopted the Iberdrola Group's Environmental Policy, Policy against Climate Change and Biodiversity Policy. These define specific guidelines we must follow in terms of our strategy, investments, operations and control of environmental risks.

The policies place a requirement on all of our businesses to foster innovation and eco-efficiency, and strive to achieve a progressive reduction in the environmental impacts of their activities.

Our activities are governed by an Environmental Management System (EMS) that covers the entire Iberdrola Group. This is supported by comprehensive systems at business and site level that are certified under various standards, such as ISO14001, Eco Management and Audit Scheme (EMAS) and ISO14064, which contribute to reducing environmental risk.

The main operating elements in our Group Environmental Management System are as follows:

Environmental guideline areas: Preserving Biodiversity, Pollution Prevention, Achieving Operational Excellence, Optimising Waste Management and Engaging with Stakeholders

Global performance indicators: Global Reporting Initiative (GRI) methodology indicators that provide an overall classification of each guideline area Environmental goals and plans: with targets, these drive actions for each guideline area within each business

Key environmental risks: identification and management through mitigation and control measures, where appropriate

Economic summary of environmental expenses and investments: Emissions Treatment, Waste Treatment, Environmental Impact Remediation, Environmental Prevention and Environmental Management.

Our businesses operates EMS based on UNE-EN-ISO 14001:2004 linking, where appropriate, to our Corporate EMS. EMS structures are embedded within an Integrated Management System (IMS).

General Methodology – for reporting carbon emissions

Scottish Power Group has reported carbon emissions at group level for many years and SP Energy Networks has contributed data to that commitment. For that reason many of the datasets used are sourced from the SP Group annual Corporate Social Responsibility report submission and co aligned to calendar year scope. The data sources are verified annually via corporate audit arrangements. General methodologies are in line with internal corporate procedures for environmental reporting which in turn align with the Greenhouse Gas Protocol and Defra Guidelines.

Source data acquisition relies upon a number of mainly supplier and contractor related bulk contract reports principally for air travel, electricity supply, and road transport fuel. Internal activity reports are sourced for other smaller scale or specialist activity measures such as red diesel use, SF6 emissions, business miles driven and network losses. Accuracy is therefore limited to that of the source systems including any rounding and estimation techniques. In practice this excludes any minor ad-hoc purchases of fuels or energy supplies made via local suppliers on a cash or credit card basis.

Electricity and natural gas use for offices and depot buildings is based upon a composite calendar year statement built from 2011/12 and 2012/13 CRC statements. In line with normal billing practice, meter readings are either on a read or estimated basis, or subject to later settlement adjustment.

Several of the datasets are supplied with business unit / location source data allowing alignment to the licence. Where this is the case, these have been directly allocated. Where business unit allocation is not pre indicated, apportionment factors have been used to subdivide the whole based upon relevant operational profiles.

Emissions for SP Transmission operations have been apportioned from the overall business total and will be reported separately via RIIO T1 requirements, in line with developing BCF requirements for transmission.

Carbon conversion constants are stated in Defra / DECC Document – Guidelines to Defra / DECC's Conversion Factors for Company Reporting July 2013.

To deliver BCF reporting an internal carbon model delivered Excel spreadsheet has been developed. This provides for;

- Input and classification of the base data sets
- GHG Protocol Scope Classification
- Ofgem BCF table classification
- General type classification
- Unit of measure classification
- Data source classification
- Input of the appropriate conversion constant
- Carbon calculation in kg and Tonnes
- Licence / business unit allocation.
- Pivot table analysis outputs by Ofgem table classification.

Contractor Data

Scope 3 contractor data is shown separately from direct operations impacts for SP Manweb and SP Distribution in the final table.

Third Party Review

AMEC Environment Infrastructure UK will be engaged to provide an independent third party audit, scheduled for late July 2014.

Network Apportionment Factors

Rules of thumb for allocation of company-wide emissions data to licensee where not pre-segregated are generally based upon a geographic profile and staff numbers in line with the proportions below. This is based upon a Human Resources supplied dataset supplied in 2010 identifying total SPEN staff numbers by geographic location. This will be reviewed and revised again the start of the RIIO ED1 period.

SP Transmission 3.89%	SP Manweb 44.39%	SP Distribution 51.72%
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Building Energy Usage – Offices & Depots

As an initial measure SP Power Systems has set a target of 15% reduction in buildings energy use.

This is based upon a calendar year composite of submissions for annual CRC reporting supplied by Scottish Power Energy Retail based upon 2012 /13 & 2013/14 datasets for gas and electricity. This uses billing data and CRC statements for the year as a baseline. The full dataset includes distribution substation use and some radio base station use, use types have been separately classified for reporting. Apportionment has been made in line with staff geographic location and numbers.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
Electricity	2,459.93	3,060.13
Natural Gas	17	9.89

Building Energy Use Developments

During 2013 we moved staff from our head office location from Bellshill to a new state of the art facility at High Blantyre. This has multiple energy saving features and will actively reduce our carbon footprint. Our former head office location will end its lease at the end of 2014 and be removed from billing schedules.

Our depot at Falkirk has been sold and will cease operations in December 2014 with staff transferring to our nearby Bonnybridge depot and elsewhere. Our aging depot at Kilmarnock is in the process of being replaced with a brand new more compact and efficient facility nearby.

During 2013/14 we have made financial provision for completion of meter installations at our Bonnybridge, Currie and Galashiels depots by the installation of AMR meters. This work currently awaits suitable supply outages to complete the works which will finalise later in 2014.

During 2013 a high efficiency lighting scheme was planned for our SP Manweb depot at Prenton. This includes fittings with integrated movement sensors switching to low power output in less busy periods. This scheme is presently in delivery and should contribute to energy use reduction at one of our highest use sites.

During 2013 we have contributed to Institute of Environmental Management and Assessment (IEMA) / Department of Energy and Climate Change (DECC) sponsored workshops shaping the new Energy Saving Opportunities Scheme (ESOS). New regulations have recently been published in 2014 requiring periodic energy audits via a national scheme. Initial implementation of this scheme by 2015 will require formal energy audits every four years, providing a further driver for energy management.

Longer term, our group estates and facilities management team will seek further opportunities to re locate from older less energy efficient sites to newer more efficient locations These measures will provide for continued improvements in energy efficiency and associated reductions in carbon into the RIIO ED1 period.

Substation Energy Use Methodology

Assessment was made in 2010/11 of substation classification, substation numbers, and use type to produce an estimate of energy used, leading to single supply agreements for the bulk of substations. Data has been sourced via CRC statements 2012 / 2013 & 2013 / 2014 provided by SP Energy Retail. A small number of substation sites are independently metered and therefore based upon metered billing. No estimate of SP Transmission substations has been made and therefore this has not been included with the exception of one metered substation.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
Electricity	20,878.08	2,952

Radio Base Station Use Methodology

The company owns or leases a number of radio base station sites for provision of communications and control equipment using electricity as a primary fuel. A few of these sites are metered and usage is sourced via 2012 /2013 and 2013/2014 CRC Statement Datasets.

For the remaining unmetered sites, use has been estimated for each site at 3,500 units per annum based upon estimated MPAN data supplied by SP Energy Retail.

During 2011, our Group Facilities Management team undertook site visits to most of the unmetered sites and identified several that were out of use or had only third party operators' resident. Where this is the case, these have been removed from the estimation process.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
Electricity	69.94	21.53

Operational Transport

Data is obtained from Shell UK / SP Procurement team derived fuel use report for petrol, diesel and LPG. The data currently excludes air, rail and sea freight data. Air travel is excluded as Helicopter line patrol travel data has not yet been developed. Rail and sea - freight are generally not used.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
Petrol / Diesel / LPG	3825.04	3282.94

Business Transport

- **Air Travel**

Data obtained from Travel & accommodation service provision contractor data - Air Travel Report spreadsheet via SP Corporate / Procurement. Revised DEFRA reporting guidelines indicate a change of conversion factor methodology from 2013. This year's conversion factors include an 8% uplift for flights using indirect routes, this is included in the factors used. The guidelines also indicate an option of inclusion of 90% uplift for "Radiative Forcing" this has not been included to maintain closer baseline parity with previous years.

- **Business Miles**

Data sourced from SP Corporate internal business miles claims for managers and staff.

- **Rail Travel**

For the first time this year we have provided rail travel data, this is sourced from an SP group wide travel and accommodation service providers report.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
Air Travel	68.25	58.58
Rail Travel	7.46	6.40
Road Travel	1423.72	951.16

Fugitive Emissions

Emissions due to SF6 losses are based on internal estimates. The SPD or SPM population volumes have been multiplied by a 0.5% loss assumption to provide the amount of SF6 leakage.

As last year for SPM and SPD, we have added data re SF6 not recovered post disposal by our contractor provided end of year disposal report. This is based upon measured recovery data and assumes volumes less than the nominal population for that type have been emitted pre disposal and not recovered pre disposal. This volume will include some data from equipment subject to disruptive failure and containment leakage indicating zero residual volume at disposal.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
SF6 Gas	1615.64	2908.87

Fuel combustion

This consists of red diesel only as non-road LPG data has not been provided by operations. The data relates to Red Diesel volumes issued via in house stock control systems.

Internal LPG plant use data is not included due to purchase via multiple local purchase systems, this is thought to be insignificant in scope due to continued move away from “hot working” methods.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
Red Diesel	56.24	56.24

Losses

- System Losses Methodology

Distribution losses data represents the last publicly available dataset, relating to the year 2009/10. No subsequent data is available at present following the decision by Ofgem not to activate the losses price control mechanism for the DPCR5 period (April 2010 to March 2015). This data will also include the network losses element of our internal energy use.

Source	SP Distribution (Tonnes)	SP Manweb (Tonnes)
Electricity	47,612	39,613

Although accurate reporting of losses is currently difficult we have committed to a range of loss control measures within our ED1 plan. These currently include;

- Establishing an accurate baseline measure for losses based upon network monitoring.
- Improve data analysis to improve our theft detection success rate.
- Installation of lower loss transformers

- Install larger size conductor on overhead line

Full details are available in our RIIO ED1 plan.

Contractors

These are scope 3 category emissions created by our contractors undertaking activities that we would otherwise have to undertake directly via our own resources. This includes reporting in terms of total carbon emissions by activity and emission source. This data consists of mixed operational and business transport, office electricity and gas and on site fuel use for generators and pumps etc.

We have carried out further development of our cable laying contractor datasets seeking standardisation of format and data supply routes. Following a carbon reporting workshop in 2013 our SP Manweb cable laying contractor data is now supplied on a monthly basis in a standardised format.

All SP Manweb cable laying contractors and one SP Distribution contractor have provided reports this year. There is still considerable room for improvement in scope in 2014 /15 and onward into the RIIO ED1 period.

Source	SP Distribution Contractors (Tonnes)	SP Manweb Contractors (Tonnes)
Buildings Energy Use Electricity	No Data	8.68
Buildings Energy Use Other Fuels	No Data	2.12
Operational Transport	700.77	1484.77
Business Transport	No Data	110.54
Fuel Combustion	92.24	226.13