

NORTHERN POWERGRID

CARBON FOOTPRINT REPORT 2012

Scope

Northern Powergrid comprises the regulated electricity distribution businesses for the north east and Yorkshire, an electrical engineering contracting subsidiary IUS and an oil and gas exploration company, CE Gas. CE Gas's carbon footprint in the UK is not material and has been excluded from this report, which covers all other parts of the business. Under a licence condition applying from 2010, our two regulated businesses are required annually to report to Ofgem and make public their carbon footprint. To ensure comparability between distribution businesses, the latter includes carbon emissions resulting from use of fuel by contractors working directly on the licensees' behalf. There are therefore some differences between the numbers in that report and this one.

Measuring our carbon footprint

We began measuring our carbon footprint in 2008 and our aim is that, through targeted initiatives, we will, over time, make continual improvement in measuring and reducing our carbon emissions. By measuring each of the components of our carbon footprint, we bring greater focus to actions to reduce them. In each case, reductions not only reduce our emissions, they also save the company money. As part of the price review settlement for 2010 to 2015, we are reporting information on our carbon footprint to Ofgem.

We measure our carbon footprint in two different ways. The first is known as our business carbon footprint. This includes our building energy use, electricity used at substations to keep equipment dry, fuel used in our commercial vehicle fleet, cars used for company purposes, business travel by air and rail, and sulphur hexafluoride (SF₆) losses from equipment. All but the last of these are uses of energy and are directly responsible for carbon emissions. SF₆ is itself a highly potent greenhouse gas and losses to the atmosphere directly contribute to global warming. Its impact is converted into equivalent carbon emissions for the purposes of the carbon footprint.

The second measurement takes our business carbon footprint and adds to it system losses from our electricity distribution network. Around four fifths of this is estimated to be the electricity lost as heat in wires and transformers; the rest results from inaccuracies in the measuring and accounting for electricity entering and exiting our network. The figures rely in part on data from domestic meters and, because these are only read periodically, some estimation is included. Corrections are made later as actual readings come in, but this can be up to 24 months afterwards. For this reason, system loss figures can only be relied on as an accurate measure when averaged over a significant period of time.

This gives a figure for our total carbon footprint.

Carbon footprint reduction

Our carbon footprint is dominated by the contribution of system losses, which have continued to fall year on year, and in 2012 were 14% lower than in 2010. The company's business carbon footprint rose slightly between 2011 and 2012, due largely to an increase in all forms of business travel. Compared with the figures for 2010, our business carbon footprint for 2012 was 8% lower, mainly due to lower losses of sulphur hexafluoride and building energy use.

Tonnes CO2	2010	2011	2012	Variance (2012 vs 2010)
Building Energy use:				
Electricity	3826	3556	3528	-8%
Gas	116	106	124	+7%
Substation electricity usage	12,290	12,108	11,786	-4%
SF6	4517	3271	3057	-32%
Fleet fuel use:				
Diesel	6705	6252	6621	-1%
Petrol	41	30	25	-39%
Gas oil	12	55	31	+258%
Business car use:				
Diesel	2503	2087	2185	-13%
Petrol	668	660	731	+9%
Other business travel:				
Air (long haul)	75	63	184	+145%
Air (medium haul)	17	11	49	+188%
Air (short haul)	6	9	14	+133%
Rail	35	44	53	+51%
Total business carbon footprint	30,812	28,252	28,382	-8%
System losses	1,388,546	1,283,989	1,194,382	-14%
Total carbon footprint	1,419,358	1,312,241	1,222,765	-14%

Actions to reduce our carbon footprint

During 2012, we continued with our major initiatives to reduce our business carbon footprint: fitting speed limiters on all new commercial fleet vehicles, improving the energy management of our buildings and substations.

External certification

Working through the CEMARS certification process, we measure and report our greenhouse gas emissions to the international standard, ISO14064-1, for quantifying and reporting an organisation's carbon footprint.

In 2012, the company retained its internationally accredited CEMARS (Certified Emissions Measurement And Reduction Scheme) certification standard that it first achieved in 2011. This award recognises the measurement of carbon emissions across the organisation and credible emissions reductions achieved over the last three years.