



Carbon Footprint 2015 – 2016



Transpower Carbon Footprint

181,200 tCO₂e
(incl. Transmission Losses)

8,961 tCO₂e
(excl. Transmission Losses)

SCOPE 1

(Direct Emissions)

3.12%

(incl. Transmission Losses)

63.03%

(excl. Transmission Losses)



SF₆ and HVAC leakage

5,132 tCO₂e
(2.83%)



Petrol and Diesel

429 tCO₂e
(0.25%)



Gas Consumption

70 tCO₂e
(0.04%)

SCOPE 2

(Electricity Emissions)

96.24%

(incl. Transmission Losses)

24.07%

(excl. Transmission Losses)



Transmission Losses

172,238 tCO₂e
(95.05%)



Local Service Sub-Stations

1,567 tCO₂e
(0.86%)



Transpower Offices and other assets

590 tCO₂e
(0.33%)

SCOPE 3

(Indirect Emissions)

0.64%

(incl. Transmission Losses)

12.9%

(excl. Transmission Losses)



Travel

1,002 tCO₂e
(0.55%)



Other Scope 3 emissions

153 tCO₂e
(0.08%)

The majority of our greenhouse gas emissions (95%) result from the transmission losses that occur as electricity is transmitted from the power generators through the national grid to the local distributors.

The level of the transmission losses depends on the distance the electricity has to travel over the network and the energy density of the local grid. These vary from year to year and are generally in the order of 3-4% of total electricity generated. The greenhouse gas emissions associated with these losses depends on the source of the electricity (for example, whether electricity is generated from hydropower or from fossil fuel sources). This also varies from year to year and has a significant impact on the overall emissions from transmission losses.

As grid owner and operator, we can't influence how electricity is generated – as such we have limited ability to reduce the emissions associated with transmission losses. However, we have included the transmission loss emissions in our carbon footprint because we recognise that transmission is our core service.

Greenhouse gas emissions also arise from the operational activities we carry out to provide our services. This includes electricity used by substations and in our offices, emissions from travel and from SF₆ leakages (a gas used as an insulator in our switchgear and circuit breakers).

Overall, our emissions in 2015/16 increased by 0.5% compared to last year (including transmission losses).