Annual Carbon Emissions 2016/17
From East Devon District Council controlled sources

EXECUTIVE SUMMARY

EDDC is reporting its carbon emissions from its own estate and operations for the fourth time, using data from the 2016-17 financial year, and DEFRA's 'reporting year 2016.

The four areas of activity included in our 2016/17 GHG emission report are:

- Use of buildings
- Fleet vehicle use
- Business travel (private vehicles)
- Water use and treatment (included for the third time)

The emissions, measured in tonnes of CO_2 equivalent (CO_2e) for these areas of activity for the reporting year (2016), the previous years (2015 & 2014) and the base line year (2013), were:

Activity	2016	2015	2014	2013
Use of buildings and operations (electricity supply)	350	793	769	784
Use of buildings (transmission & distribution of electricity)	66	66	67	67
Use of buildings (natural gas)	330	350	353	368
Use of buildings (LPG)	3	3	2	-
Fleet vehicle use of diesel & petrol	395	388	402	420
Business travel (car use only) use of diesel & petrol	120	110	121	135
Water supply	12	11	13	-
Water treatment	25	24	27	-
Total	**1,301**	**1,745**	**1,754**	**1,774**

The total emissions this year have reduced by 25.4% from Reporting Year 2015's total of 1745 tonnes CO_2e, due largely to the purchase of renewable electricity for all supplies from October 2016. This is despite an increase in reported electricity use of 3.5%, including unmetered electricity. Fleet vehicle emissions increased by 1.8%, and Business vehicle emissions grew by 8.8% after an increase in mileage of 8.7%. Emissions from the supply and treatment of water increased by 5.1%, as did water consumption.

REPORT

Emission releasing activities are classified by operational 'scope', as defined in DEFRA's Reporting Guidelines, page 35, the relevant excerpt from this document is:

"A widely-accepted approach is to identify and categorise emissions-releasing activities into three groups known as scopes. These are defined in the GHG Protocol Corporate Standard and are described below with their equivalent term from ISO 14064-1 in brackets:

Scope 1 (Direct emissions): *Emissions from activities owned or controlled by your organisation that release emissions into the atmosphere. They are direct emissions. Examples of scope 1 emissions include emissions from combustion in owned or controlled boilers, furnaces, vehicles; emissions from chemical production in owned or controlled process equipment.*

Scope 2 (Energy indirect): *Emissions released into the atmosphere associated with your consumption of purchased electricity, heat, steam and cooling. These are indirect emissions that are a consequence of your organisation's activities but which occur at sources you do not own or control.*

Scope 3 (Other indirect): *Emissions that are a consequence of your actions, which occur at sources which you do not own or control and which are not classed as scope 2 emissions. Examples of scope 3 emissions are business travel by means not owned or controlled by your organisation, waste disposal which is not owned or controlled, or purchased materials or fuels."*

In this report DEFRA's 'Standard Set' of factors is used to convert the energy consumed into the resulting emissions and calculate the kilograms and tonnes of CO_2e for each activity.

RESULTS

EDDC has measured certain scope 1, 2 and 3 emissions for its areas of activity. The emissions for the four areas of activity for the financial year 2016-2017 and their scope type are given in Table 1 as follows;

Table 1: Greenhouse Gas Emissions for EDDC 2016-2017

Emissions Source	Tonnes CO_2e
Scope 1	
Use of buildings (natural gas)	330
Use of buildings (propane LPG)	3
Fleet vehicles	395
Scope 2	
Use of buildings (electricity)	350
Scope 3	
Use of buildings (transmission & distribution of electricity)	66
Business travel (private vehicles)	120
Water supply	12
Water treatment	25
Out of scope	
Fleet vehicle use (biogenic fuel element), out of scope	9
Totals	
Scope 1 and 2	1,078
Scope 3	223
Gross emissions total	**1,301**
Out of scope	9

Notes:

The above does not include emissions from EDDC buildings occupied by LED Leisure Ltd, nor does it include emissions from the council's waste and recycling operations outsourced to SITA (Suez) Ltd, nor emissions from the council's housing maintenance partnering contracts with Skinner Construction Ltd and MD Building Services Ltd.

Comparison with the 2013/14 base line year

In comparison to the base year, 2013, the total emissions for 2016 have decreased by 473 tonnes CO_2e or 26.7%.

Comparison with the previous 2015/16 year

A comparison is made below of Council activities by scope between Reporting years 2015/16 and 2016/17.

- Use of buildings (natural gas), scope 1:
  Emissions have reduced by 20 tonnes CO_2e (5.7%) over the 2015 Reporting year, from 353 to 350 tonnes CO_2e. Records show an overall reduction in gas use of 5.4%, largely from a 10% reduction at our largest site, the Knowle Council office building. Other factors contributing to the reduction are: the transfer of ownership of Seaton Town Hall and a drop of 46% in use at 19-26 Powell Close, Seaton.
  Natural gas is used for heating buildings and a reduction in consumption has occurred despite the colder heating season of 2016-17 compared to 2015-16. By a measure of degree days (15.5°C base[6]) the 2016 reporting year heating season was 8.3% colder than 2015.

- Use of buildings (propane LPG), scope 1:
  This activity is reported this year for the third time. This shows an increase of 6.2% in the use of LPG at this small, single site (Withycombe Common Changing Rooms, Exmouth) with an associated 5.9% increase in emissions, rising from 3.06 to 3.24 tonnes CO_2e. Fuel deliveries at this site are sporadic and figures for LPG use are likely to be inaccurate, needing to be averaged from estimates of gas in stock at the beginning and end of the reporting period. Data for this site could be made more robust by the installation of a gas meter.

- Fleet vehicle use (diesel and petrol), scope 1:
  Emissions increased by 7 tonnes CO_2e (1.9%) during this Reporting Year for this activity, from 388 to 395 tonnes CO_2e. This is largely attributable to increases in fuel used and in the DEFRA conversion factors.

- Fleet vehicle use (biogenic fuel element), out of scope:
  This measure has increased by approximately 3.6 tonnes CO_2e (27.5%) over reporting year 2015, from 13 to 9 tonnes CO_2e. This is largely explained by a 30% decrease in the DEFRA factor for diesel for this measure. Diesel fuel represents 92.5% of the fleet's total consumption.

- Use of buildings (electricity), scope 2:
  Emissions from electricity supply have decreased by 443 tonnes CO_2e (55.8%), from 793 to 350 tonnes in 2016 compared to 2015, almost wholly as a result of purchase for the first time of renewable electricity, rated at zero emissions, for all supplies from 1 October 2016. It has included emissions from 17unmetered electricity supplies for the second time under this measure's Scope 2. The volume of electricity consumption reported has increased by 3.5%. A reduction in the DEFRA factor for CO_2e emissions of 10.8% for conventional electricity, consumed before 1 October 2016, reflects further decarbonising of UK power stations. This has contributed to the overall decrease in 2016's emissions for this activity.

- Use of buildings (transmission & distribution of electricity), scope 3:
  The small increase in electricity use in 2016 and its associated CO_2e emissions have been offset by a reduction in the DEFRA factor for this measure of 2.7%, balancing this year's emissions to match last year's total of 66 tonnes. Scope 3 emissions for this activity are not reduced by the purchase of renewable electricity, as for Scope 2 emissions.

- Business travel (car use only), scope 3:
  Emissions from the use of private cars on Council business increased by 9.7 tonnes CO_2e (8.8%), from 109.9 to 119.6 tonnes CO_2e. This reflects an 8.7% increase in claimed mileage from 401,691 miles in 2015 to 436,714 miles in 2016, slightly offset by the continued replacement by their owners of older, less efficient vehicles.

- Water supply and treatment
  Emissions from water supply and treatment, first reported in 2014 as 13.3 and 27.3 tonnes CO_2e respectively, both showed a reduction of 14.2% between 2014 and 2015 and an increase of 5.1% in 2016. Consumption resulting from both these activities changed by almost exactly the same percentages over the same period. The number of water meters included in the Reporting Years increased from 86 in 2014 to 101 in 2015, reducing to 98 in 2016.