**Energy and Carbon Reporting Issue – February 2019**

The following report provides a snapshot of our carbon emissions performance against the carbon reduction targets 2013-2018. For a more detailed review of year to year performance, please refer to the University’s [Annual Sustainability and Environmental Reports](http://www.cardiffmet.ac.uk/about/sustainability/Pages/Sustainability-and-Environmental-Reports.aspx).

 **Our Carbon Targets and Performance**

Cardiff Metropolitan University’s 5 year Carbon Management Strategy for the period 2013-2018 builds upon the previous strategy which was successful in achieving emissions reductions of 16.3% against a 12% target largely from behavioural change, technical projects and improved housekeeping. The current strategy tasks the University with reducing a further 3% in carbon emissions per year up until 2018 in line with Welsh and UK Government long term ambitions.

The existing University energy reduction targets are as follows:

**Source** **Target**

Energy Reduce absolute carbon emissions from energy by 15% by 2017/18, compared to the 2012/13 baseline. This is equal to a 3% reduction in energy related CO2e emissions per annum.

Water Reduce absolute carbon emissions from water by 15% by 2017/18, compared to the 2012/13 baseline. This is equal to a 3% reduction in water related CO2e emissions per annum.

Waste Maintain zero waste to landfill and work towards Welsh Government target of recycling 70% of our waste by
 2025.

 **Progress against Carbon Emissions Targets**

In light of growth in the University estate, variations in student staff and numbers and changes to the operating hours of our buildings, progress against the targets for 2013-2018 are expressed in terms of the following metrics:

* Absolute emissions:
* Emissions intensity per FTE (full time equivalent) – including staff and students
* Emissions intensity per m2 of building floor area
* Residential and Non-residential emissions

Progress against Scope 1 and 2 direct emissions (electricity and gas) are inclusive of all utility data which provide an accurate comparison of performance on a year by year basis, however reporting against Scope 3 indirect emissions is currently in development and is not included within the absolute emissions performance outlined below. Scope 3 emissions are currently reported separately for water supply and treatment, and waste emissions only.

**Absolute Emissions Performance**

The following tables provide emissions intensity performance for electricity, gas and water emissions against FTE staff and student numbers and University wide building floor area (GIA). Water emissions are inclusive of both supply and treatment.
Floor area and FTE data used is taken from the University’s Annual HESA return.

**Emissions intensity per FTE (tCO2e)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|   | **2012/13** | **2013/14** | **2014/15** | **2015/16** | **2016/17** | **2017/18** | **Change from previous year** |
| Total Electricity emissions |  3,506  |  3,710  |  3,556  |  3,323  |  2,970  |  2,626  | **-12%** |
| Total Gas emissions |  2,081  |  2,152  |  2,055  |  1,931  |  2,027  |  2,231  | ***10%*** |
| Total Water emissions |  56  |  62  |  63  |  63  |  67  |  68  | ***1%*** |
| *Total staff and students* | *9,593* | *9,546* | *9,636* | *9,778* | *9,763* | *9,626* | ***-1%*** |
| Electricity per FTE (tCO2e) |  0.37  |  0.39  |  0.37  |  0.34  |  0.30  |  0.27  | **-10%** |
| Gas per FTE (tCO2e) |  0.22  |  0.23  |  0.21  |  0.20  |  0.21  |  0.23  | **12%** |
| Water per FTE (tCO2e) |  0.006  |  0.006  |  0.007  |  0.006  |  0.007  |  0.007  | **3%** |

**Emissions intensity per m2 floor area (GIA)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2012/13** | **2013/14** | **2014/15** | **2015/16** | **2016/17** | **2017/18** | **Change from previous year** |
| Floor area (m2) | 89,982 | 91,224 | 92,742 | 93,408 | 95,648 | 95,648 | **+ 0%** |
| Electricity (tCO2e) | 0.039 | 0.041 | 0.038 | 0.036 | 0.031 | 0.027 | **- 11.58%** |
| Gas (tCO2e) | 0.023 | 0.024 | 0.022 | 0.021 | 0.021 | 0.023 | **+ 10.06%** |

**Residential and Non-Residential Emissions Performance**

The following table provides a summary of the carbon emissions from both the academic estate and the residential estate attributable to electricity, gas and water.

This information is reported to the Higher Education Statistics Agency (HESA) every year.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 2017/18\* | 2016/17\* | 2015/16\* | 2014/15\* | 2013/14\* |
| Non-residential scope 1 and 2 carbon emissions | 2,854 | 3,425 | 3,390 | 3,760 | 4,103 |
| Residential scope 1 and 2 carbon emissions | 1,020 | 1,082 | 1,043 | 1,109 | 1,050 |
| Total scope 1 and 2 emissions | **3,874** | **4,507** | **4,433** | **4,869** | **5,153** |
| Non-residential scope 3 carbon emissions from water supply | 13.56 | 13.78 | 12.59 | 12.25 | 11.47 |
| Residential scope 3 carbon emissions from water supply | 9.56 | 9.04 | 8.82 | 8.81 | 8.63 |
| Total scope 3 carbon emissions from water supply | **23.12** | **22.82** | **21.41** | **21.06** | **20.11** |
| Non-residential scope 3 emissions from water treatment | 26.52 | 26.95 | 24.62 | 23.96 | 22.43 |
| Residential scope 3 carbon emissions from water treatment | 18.70 | 17.69 | 17.26 | 17.3 | 16.89 |
| Total scope 3 carbon emissions from wastewater treatment | **45.22** | **44.64** | **41.88** | **41.2** | **39.32** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

*\*Values expressed in tonnes of equivalent carbon dioxide (tCO2e)*