MITIGATION BASELINE

SOUTH DUBLIN COUNTY COUNCIL'S ENERGY USE & EMISSIONS

South Dublin County Council (SDCC) is responsible for the energy use and emissions from its buildings and facilities, its public lighting, and also its vehicle fleet. The information from the Sustainable Energy Authority of Ireland's (SEAI's) Monitoring and Reporting (M&R) database shows that SDCC consumed a total of 53 GWh (gigawatt hours) of primary energy in 2017. The energy database also shows that SDCC improved its energy performance by 25.4% between the baseline year and 2017. This highlights a gap-to-target of 7.6%, meaning that SDCC must improve its energy performance by a further 7.6% between now and 2020, in order to meet its 33% energy reduction target.

The Council's public lighting was the highest energy consumer, accounting for 48% of the Council's overall primary energy consumption. Buildings and facilities were the second highest energy consumers, accounting for 43% of the total energy consumption, while the municipal fleet accounted for 9% of the total energy use.

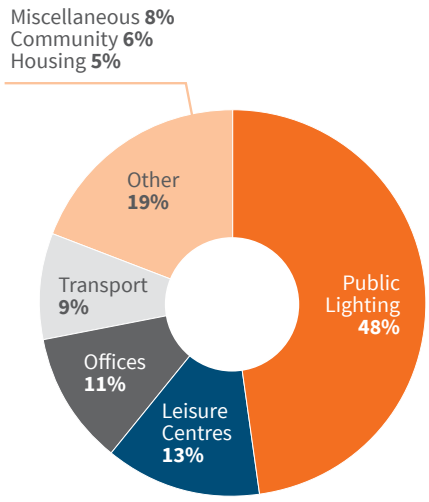


Figure 15 Significant Energy Users

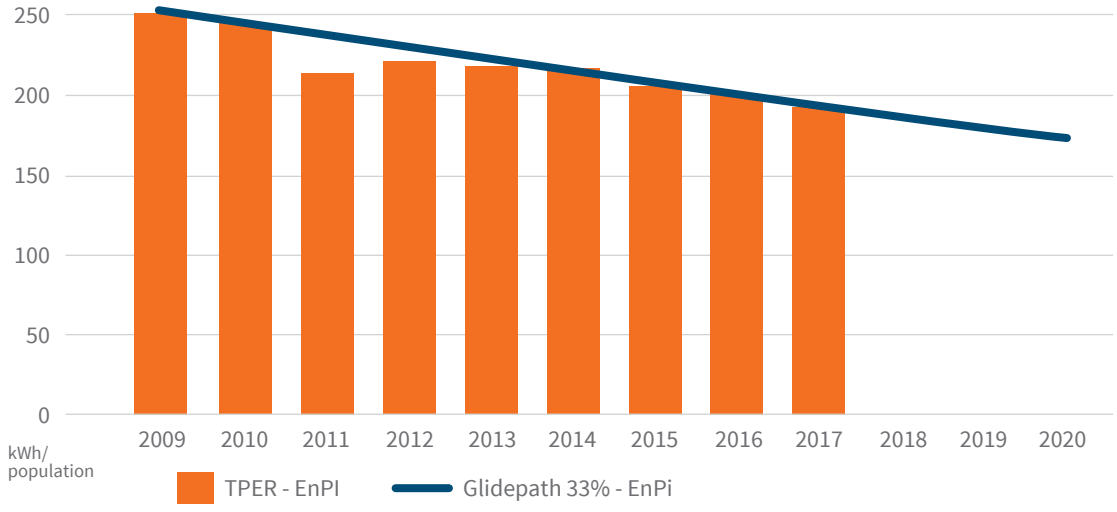


Figure 16 SDCC's Annual Energy Performance Compared to the 33% Glidepath

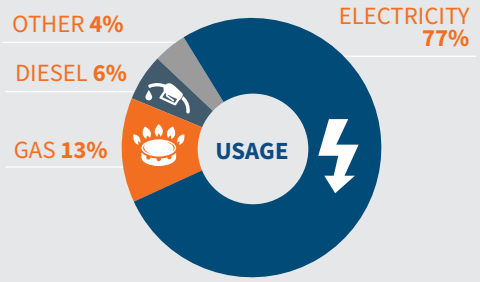
SDCC'S EMISSIONS OVERVIEW

TOTAL EMISSIONS PRODUCED BY SDCC IN 2017

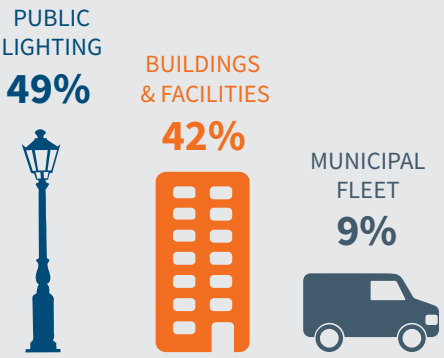
11,800

TONNES OF CO_2

SDCC'S EMISSIONS PER FUEL TYPE



SDCC'S EMISSIONS PER CATEGORY



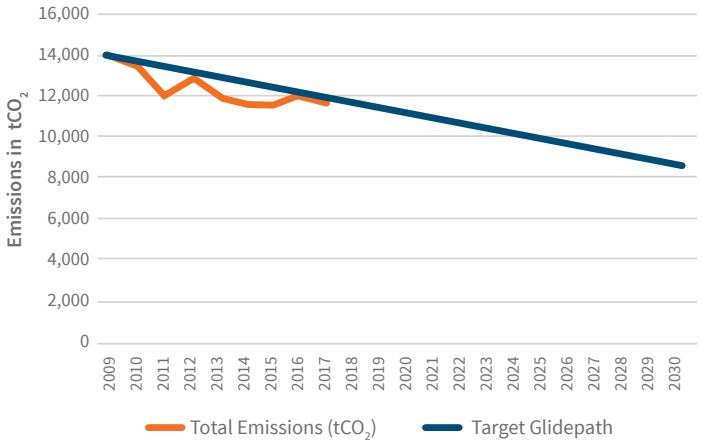


Figure 17 SDCC's Emissions 2009-2017, with Projected Glide Path to the 40% Reduction Target by 2030

As a signatory to the Covenant of Mayors for Climate and Energy, SDCC is committed to reducing its own emissions by 40% by 2030, compared to the baseline year, which is an average of between 2006 – 2008.

Figure 17 shows that SDCC's emissions decreased from 14,230 tonnes of CO_2 in 2009 to 11,800 tonnes of CO_2 in 2017. This means that SDCC is now 3,270 tonnes of CO_2 (23%) away from the 2030 target of a 40% emission reduction.

Public lighting was the biggest emitter at 49%, followed by buildings and facilities and then the municipal fleet, which contributed 42% and 9% to the Council's emissions, respectively.

In 2017, 77% of emissions by the Council came from electricity; this was mainly due to the large amount of electricity used in public lighting and in buildings/facilities. Natural gas was the second highest contributor to emissions at 13%. The majority of gas was used in buildings and facilities in SDCC to meet heating demands. Diesel, which made up part of the energy used for the vehicle fleet, accounted for 6% of the total emissions.

SOUTH DUBLIN COUNTY COUNCIL'S SOCIAL HOUSING

SDCC is responsible for the allocation, maintenance and refurbishment of its social housing stock, but not the day-to-day energy use of its tenants. However, the Council can take steps to reduce these emissions, through energy efficiency upgrades.

The most recently-available information for SDCC's social housing is based on the Council's social housing data for 2016 and SEAI's Building Energy Rating (BER) Research Tool. A BER is a certificate of energy efficiency of a property. Properties that achieve an 'A1' rating are the most energy efficient, while properties with a 'G' rating are the least efficient.

Figure 18 below shows the BERs for all the social housing stock in South Dublin. We can see that the most common rating was C2, which made up 27% of the total social housing stock; this was higher than the county-wide average D rating. 77% of the housing stock was rated C3 or better, which reflects the retrofitting work already carried out by SDCC to upgrade the less efficient social housing stock.

Of the total social housing stock, 47 units had an A3 rating. However, no A1 or A2 dwellings could be found in South Dublin for 2016 and data gathered from SEAI's BER Research Tool did not contain any A1 or A2 dwellings, so these are not reflected in the charts. There were very few F and G rated houses; they made up just 1% of the total social housing stock in South Dublin.

SOCIAL HOUSING EMISSIONS OVERVIEW

TOTAL EMISSIONS FROM SOCIAL HOUSING SECTOR IN 2016

29,180 tCO_2

77%
RATED C3 OR BETTER

77% OF SOCIAL HOUSING STOCK IN SOUTH DUBLIN WAS RATED **C3 OR BETTER**, WITH **C2** BEING THE MOST COMMON BER TYPE

65%
OF EMISSIONS CAME FROM NATURAL GAS

FOLLOWED BY ELECTRICITY AT 30%, WHICH SHOWS THE MAJORITY OF EMISSIONS CAME FROM THE NEED TO **MEET HEATING REQUIREMENTS**

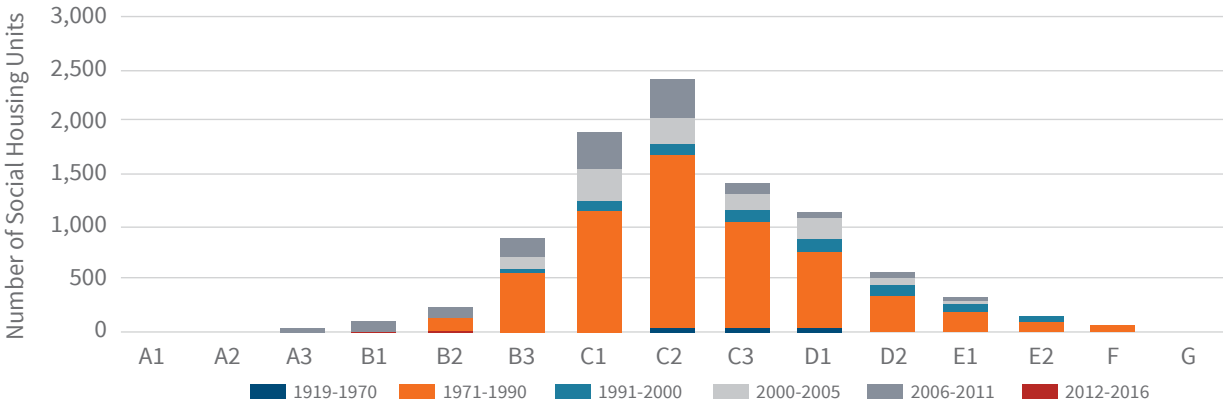


Figure 18 SDCC's Social Housing Units by Construction Period and BER Rating, as in 2016

TOTAL EMISSIONS FOR SOUTH DUBLIN

The most recently-available information for total emissions in the entire South Dublin area is based on Census 2016 data. Therefore, using this data, Codema was able to calculate that the total GHG emissions for the South Dublin area amounted to 1,877,910 tonnes of CO_2 equivalent in 2016. The sectors that produced the most emissions were the transport, commercial and residential sectors, accounting for 38.9%, 32.4% and 24.4% of the total emissions, respectively. South Dublin County Council's own emissions amounted to only 0.6% of this total, with social housing contributing another 1.6%. This highlights the need for collaboration and action from all stakeholders to tackle the remaining 97.8% of emissions from public and private sector sources in the County.

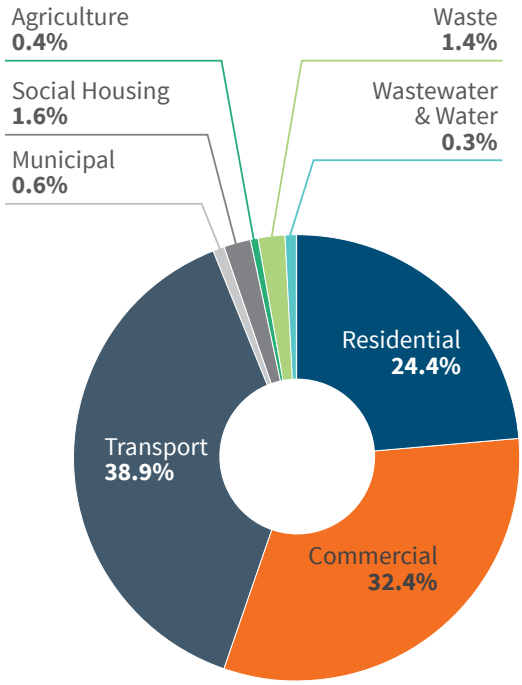


Figure 19 Total GHG Emissions for South Dublin per Sector

Photo Source: William Murphy / Flickr

Further information

For further information and a more detailed analysis of the GHG emissions of South Dublin County Council and the South Dublin area, please refer to Appendix I of this document, or read Codema's *South Dublin Baseline Emissions Report 2016* at www.codema.ie/publications