

MITIGATION BASELINE

A photograph of industrial smokestacks emitting large plumes of white smoke against a dramatic, orange and blue sky at sunset or sunrise. The smokestacks are dark silhouettes against the bright, glowing sky. The smoke plumes are thick and billowing, with a mix of white and orange tones. The sky is a deep blue with a gradient of orange and red near the horizon, suggesting a sunset or sunrise. The overall mood is industrial and atmospheric.



FINGAL COUNTY COUNCIL'S ENERGY USE & EMISSIONS

Fingal County Council (FCC) is responsible for the energy use and emissions from its buildings and facilities, its public lighting, and also from its vehicle fleet. The information from the Sustainable Energy Authority of Ireland's (SEAI's) Monitoring and Reporting (M&R) database shows that FCC consumed a total of 56.5 gigawatt hours (GWh) of primary energy in 2017. The energy database also shows that FCC improved its energy performance by 30.3% between the baseline year (which is an average of between 2006 - 2008) and 2017, which represented a cumulative absolute saving of 12 GWh of primary energy during the same period. This highlights a gap-to-target of 2.7%, meaning that FCC must improve its energy performance by a further 2.7% between now and 2020, in order to meet its 33% energy reduction target.

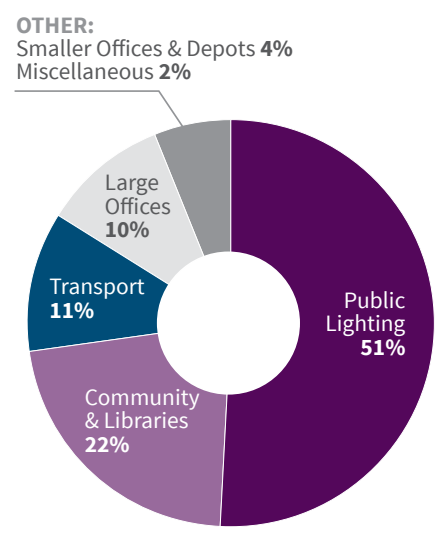


Figure 20 Significant Energy Users

The Council's public lighting was the highest energy consumer, accounting for 51% of the Council's overall primary energy consumption. Buildings and facilities were the second highest energy consumer, accounting for 38% of the total energy consumption, while the municipal fleet accounted for 11% of the total energy use.

As a signatory to the Covenant of Mayors for Climate and Energy, FCC is committed to reducing its own emissions by 40% by 2030, compared to the baseline year.

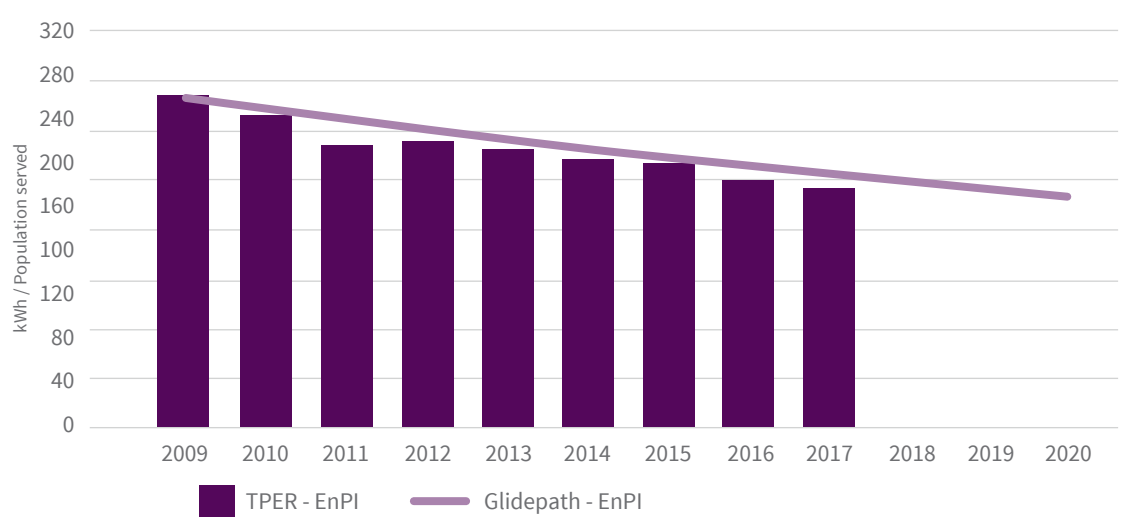
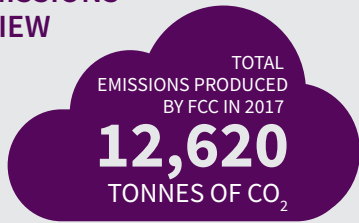
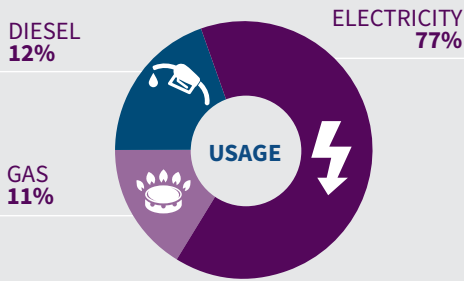


Figure 21 FCC's Annual Energy Performance Compared to the 33% Glidepath

FCC EMISSIONS OVERVIEW



FCC'S EMISSIONS PER FUEL TYPE



FCC'S EMISSIONS PER CATEGORY

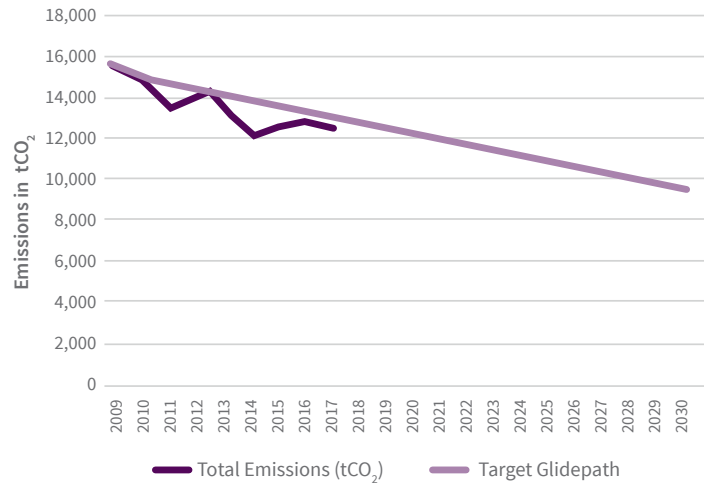
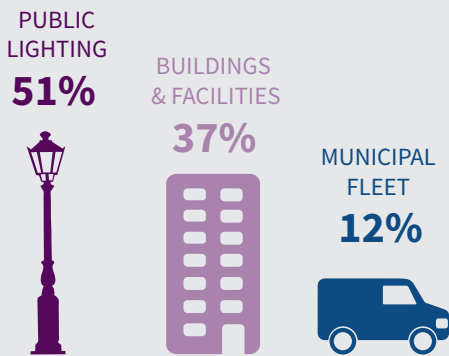


Figure 22 FCC's Emissions 2009-2017, with Projected Glide Path to the 40% Reduction Target by 2030

Figure 22 above shows FCC's emissions between 2009 to 2017, with a projected glide path to the 40% reduction target by 2030. This shows that FCC's emissions decreased from 15,570 tonnes of CO₂ in 2009 to 12,620 tonnes of CO₂ in 2017. This means that FCC is now 3,280 tonnes of CO₂ (21%) away from the 40% emission reduction target by 2030.

Public lighting was the highest contributor, accounting for 51% of the total emissions. This was followed by buildings and facilities, and the municipal fleet, each contributing 37% and 12% to the Council's emissions, respectively.

In 2017, 77% of the Council's emissions came from electricity; this was mainly due to the large amount of electricity used in public lighting and in the Council's buildings and facilities. Natural gas contributed 11% to emissions, the majority of which was used for space heating in Council buildings and facilities. Diesel, which made up the majority of the energy used for the vehicle fleet, contributed 12% to the total emissions.

FINGAL COUNTY COUNCIL'S SOCIAL HOUSING

Fingal County Council is responsible for the allocation, maintenance and refurbishment of its social housing stock, but not for 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 FCC'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 23 below shows the estimated BERs for all the total social housing stock in Fingal. It can be seen that the most common rating was C2, which made up 28% of the total social housing stock in the County. 75% of the housing stock was rated C3 or better, which reflects the retrofitting work already carried out by FCC to upgrade the less efficient social housing stock. The majority of the higher A and B ratings were made up of newer built housing.

The social housing stock in Fingal is an ageing housing stock, and as a result, newly built or refurbished dwellings would generally perform better. In 2016, there were no A1 or A2 ratings in the social housing sector in Fingal. Similarly, data gathered from SEAI's BER Research Tool did not contain any A1 or A2 dwellings for 2016, so these are not reflected in the charts. Very few buildings (less than 1%) were found to be F and G-rated.

SOCIAL HOUSING EMISSIONS OVERVIEW

TOTAL EMISSIONS FROM SOCIAL HOUSING SECTOR IN 2016

15,070 tCO₂



75% OF SOCIAL HOUSING STOCK IN FINGAL WAS RATED **C3 OR BETTER**, WITH 'C2' BEING THE MOST COMMON BER TYPE



73% OF EMISSIONS CAME FROM NATURAL GAS

FOLLOWED BY ELECTRICITY AT 24%, WHICH SHOWS THE MAJORITY OF EMISSIONS CAME FROM THE NEED TO **MEET HEATING REQUIREMENTS**

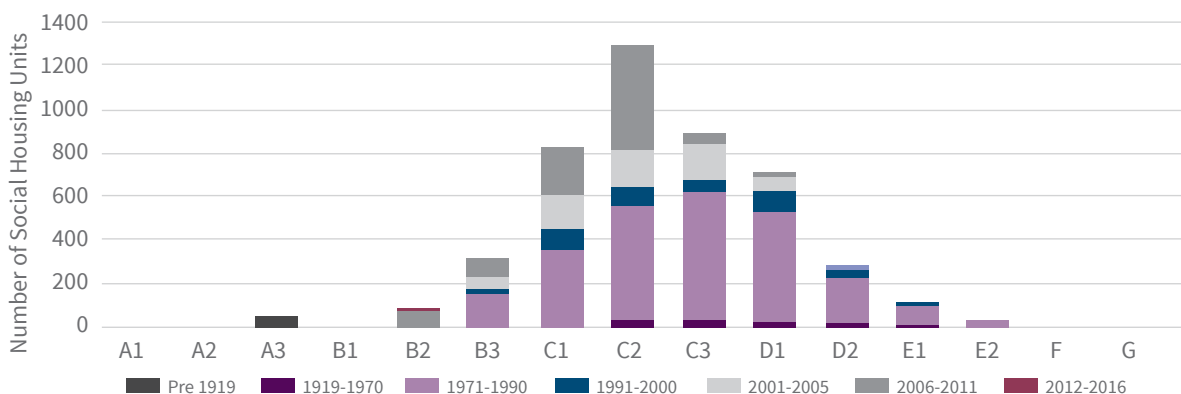


Figure 23 FCC's Social Housing Units by Construction Period and BER Rating, as in 2016

TOTAL FINGAL COUNTY EMISSIONS

The most recently-available information for total emissions in the entire Fingal area is based on Census 2016 data. Therefore, using this data, Codema was able to calculate that the total emissions for the Fingal area amounted to 1,976,230 tonnes of CO₂ equivalent in 2016. The sectors that produced the most emissions were the transport, residential and commercial sectors, accounting for 44.6%, 26% and 24.5% of the total emissions, respectively. Fingal County Council's emissions amounted to only 0.6% of the total County emissions, with social housing contributing another 0.8%. This highlights the need for collaboration and action from all stakeholders to tackle the remaining 98.6% of emissions from public and private sector sources in the County.

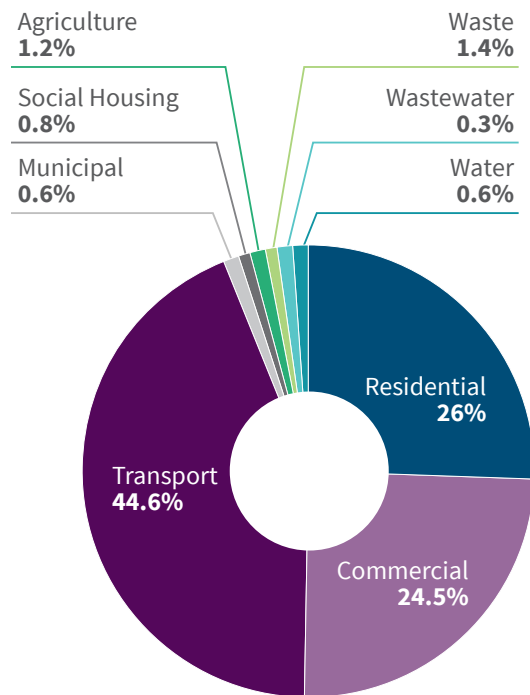


Figure 24 Total GHG Emissions for Fingal County per Sector



Photo Source: Wikimedia Commons / Bjørn Christian Tørrissen



Further information

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