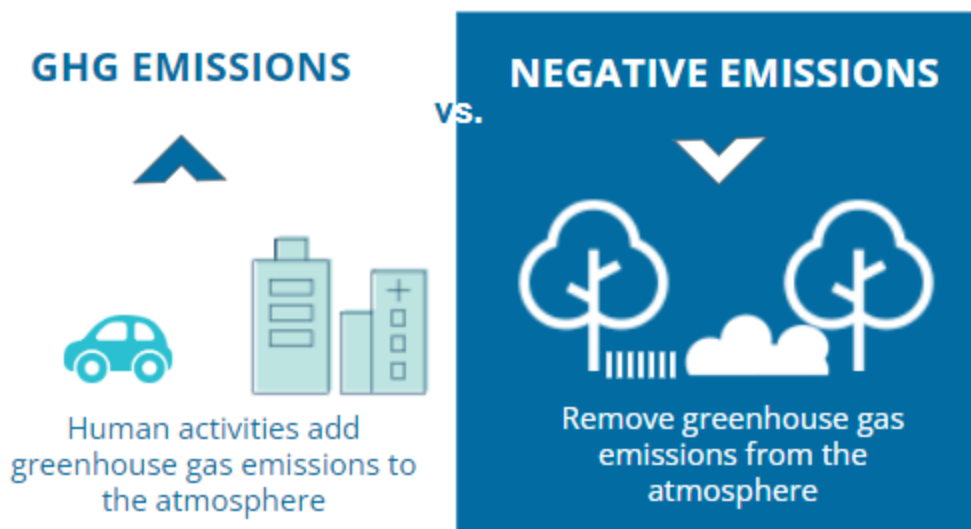


Annual Targets and Negative Emissions

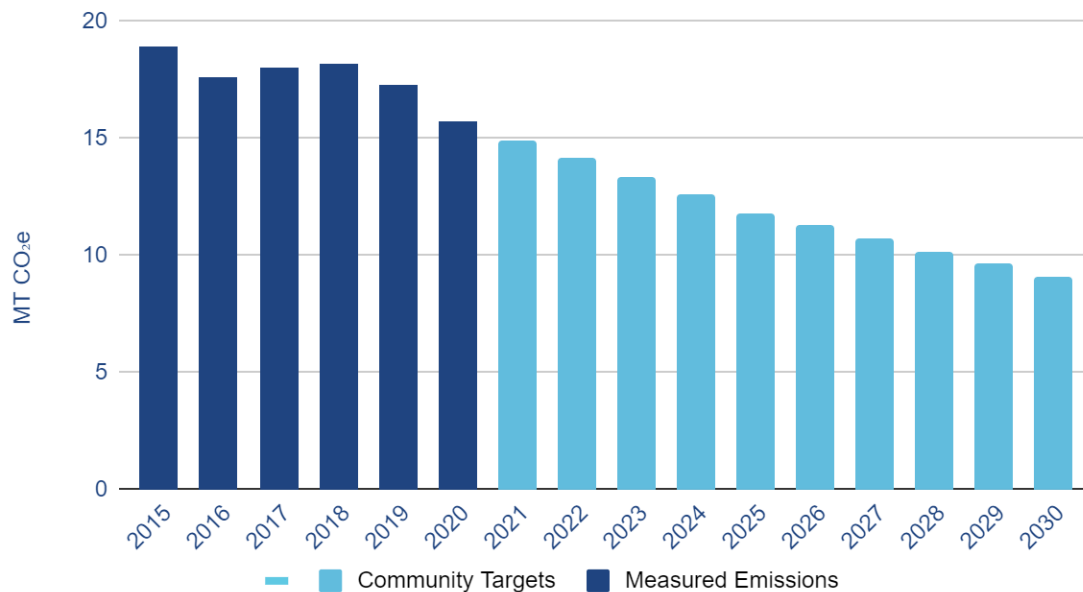
Greenhouse gas emissions come from different activities such as burning fossil fuels to make energy to use for transportation, electricity to heat buildings and for industrial purposes. Greenhouse gas emissions cause climate change. Negative emissions (or greenhouse gas removal) is the opposite of greenhouse gas emissions. Negative emissions refers to removing greenhouse gasses from the atmosphere through: i) technology (e.g. removal through carbon capture equipment), or 2) nature based solutions (e.g. removal through increasing trees or other natural carbon sinks). Every pathway analyzed in the IPCC's Special Report on Global Warming of 1.5°C found that negative emissions are necessary to limit global warming to 1.5°C with limited or no overshoot.



Administration was directed to identify annual emissions reductions needed to achieve the targets outlined in the Energy Transition Strategy for community emissions. These targets include a 35 per cent reduction in community emissions by 2025 and a 50 per cent reduction in community emissions by 2030 from 2005 levels.

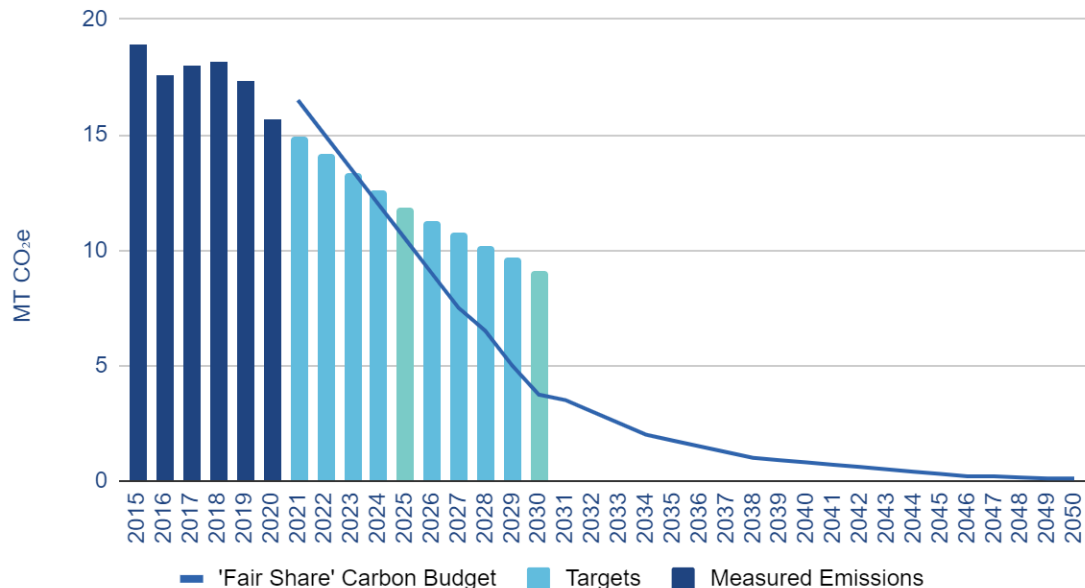
Annual targets have been drafted for 2020-2030. Administration has used the 2025 and 2030 targets as the goal posts for establishing annual targets. This sets an annual reduction trajectory of an average reduction of seven per cent in emissions annually until 2025 and an average reduction of five per cent in emissions annually from 2026-2030.

Edmonton Community GHG Emissions and Targets



Administration was also directed to identify “negative emissions” needed to stay within the community “fair share” carbon budget. Achieving Edmonton’s “fair share” (i.e. going further due to Edmonton’s high per capita GDP and to compensate for historic and current high emissions) local carbon budget requires going further than reduction targets and finding ways to also remove emissions from the atmosphere (i.e. negative emissions). Targets were established to align with the Paris Agreement, whereas the Carbon Budget is aligned with achieving a fair share of climate action. The fair share carbon budget was identified using the C40 methodology, and is based on the theory that cities with above average greenhouse gas emissions and with high per capita GDP need to reduce emissions on a steep decline. In order to stay within the local fair share carbon budget, an additional 23 megatonnes (Mt) of negative emissions are needed from 2021-2030. As part of the carbon accounting framework underway, the City of Edmonton has also developed “target based” Community and Corporate carbon budgets aligned with the emission reduction targets set in the Energy Transition Strategy, aimed at achieving a 1.5 degree global average temperature increase as outlined by the Paris Agreement. These target based budgets will be tracked as part of the carbon accounting framework.

Negative Emissions



The Targets and “fair share” Carbon Budget were decoupled to allow Edmonton to better understand the need for fair share actions within the national context.

The UN Climate Change Conference of the Parties that took place in Glasgow in November of 2021 (COP26) brought together world leaders to outline commitments for accelerating global cooperation and action on climate change.

At COP26 the federal government committed to doubling its international climate finance commitment, from \$2.65 billion to \$5.3 billion over the next five years. This commitment represents Canada acknowledging the need for developed countries to do their fair share to help low and middle income countries already affected by climate change. A better understanding is required on if additional fair share actions are needed by Edmonton given Canada’s current increased fair share actions. Action 4.12 in the Energy Transition Strategy’s 10-year Action Plan is for Administration to continue to monitor offset efforts by other orders of government and explore pathways to offset community emissions/reach carbon neutrality.