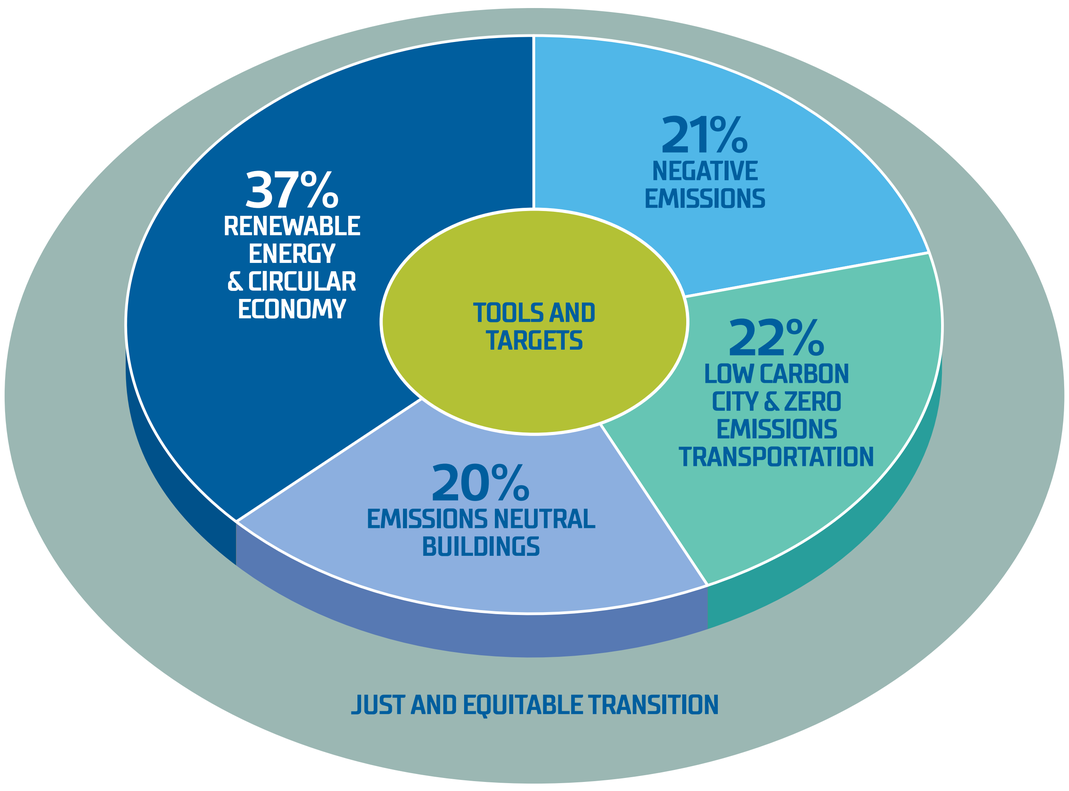
COMMUNITY ENERGY TRANSITION STRATEGY

The City of Edmonton is updating its Community Energy Transition Strategy (CETS) to align with the international target of limiting global warming to 1.5˚C.

To meet this target Edmonton must stay within a local carbon budget of 155 Megatonnes. This is the total amount of CO2e emissions permitted from now until 2050. At our current emissions this budget would be exceeded in 8 to 10.5 years from now.

For this reason the CETS must be updated to be more ambitious in speed and scale of change. The six climate shifts on the right are the basis for this update.
Please advise us and help us further refine how we could make the ideas on each shift happen in Edmonton.

CONTRIBUTION TOWARDS TARGET



SIX CLIMATE SHIFTS

CLIMATE SHIFT 1
TOOLS & TARGETS

CLIMATE SHIFT 2
LOW CARBON CITY AND ZERO EMISSONS TRANSPORTATION

CLIMATE SHIFT 3
EMISSIONS NEUTRAL BUILDINGS

CLIMATE SHIFT 4
RENEWABLE REVOLUTION & CIRCULAR ECONOMY

CLIMATE SHIFT 5
JUST AND EQUITABLE TRANSITION

CLIMATE SHIFT 6
NEGATIVE EMISSIONS

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CLIMATE SHIFT 1

TOOLS & TARGETS

These are the tools and targets the City of Edmonton will be using to model, monitor and measure its contribution to global climate change and to make better informed decisions:

LOCAL CARBON BUDGET

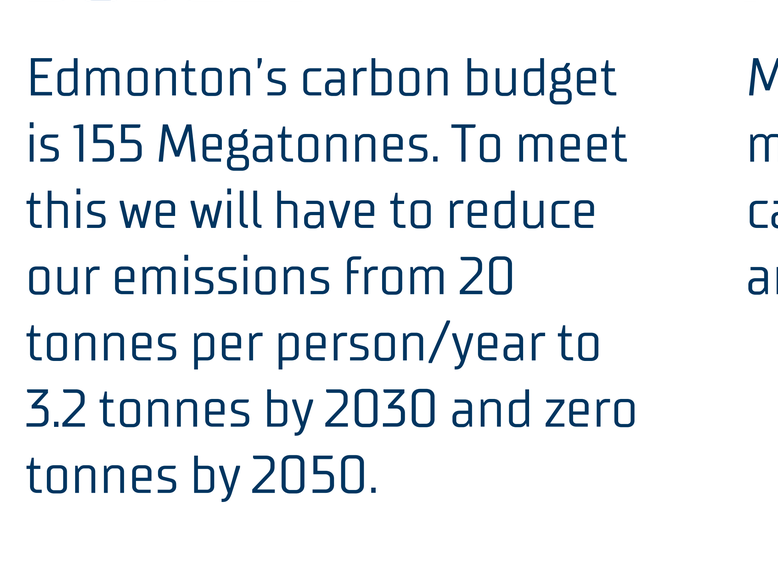
Edmonton's carbon budget is 155 Megatonnes. To meet this we will have to reduce our emissions from 20 tonnes per person/year to 3.2 tonnes by 2030 and zero tonnes by 2050.

CARBON ACCOUNTING

Municipal decisions will be made by integrating the local carbon budget into operating and capital planning.

CONSUMPTION BASED INVENTORY

Understanding and accounting for the carbon emissions of the items we import or export to and from Edmonton.



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CLIMATE SHIFT 2

LOW CARBON CITY AND ZERO EMISSONS TRANSPORTATION

As Edmonton grows to be the home of two million people, we will need to be a low carbon city (with emissions free transportation) to be able to meet the target of limiting global warming to 1.5°C.

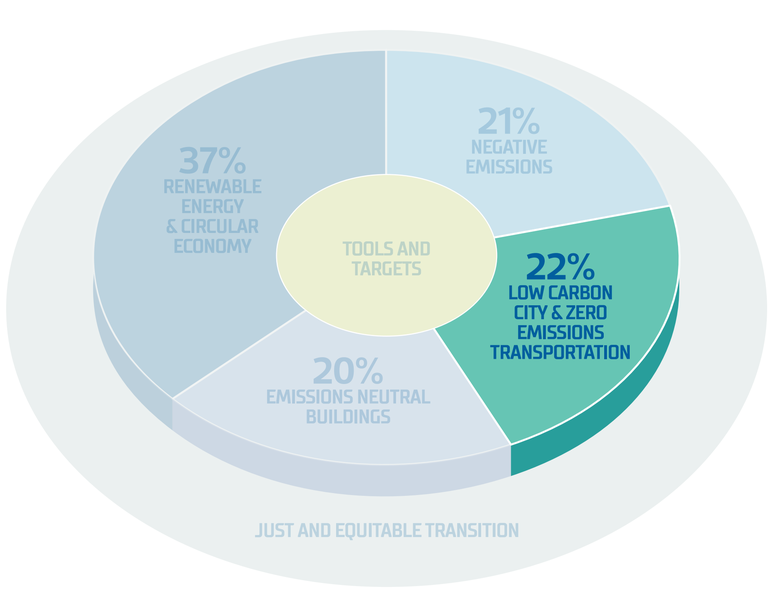
Examples of what could be pursued:

TRANSITION TO A ZERO CARBON EMISSION TRANSPORTATION SYSTEM

Possible target: 100% of new personal vehicle sales are electric by 2030.

ENCOURAGE EMISSIONS FREE MODE SHIFT OPTIONS BY INCREASING ACTIVE TRANSPORTATION INFRASTRUCTURE

Possible target: 50% of trips less than 5 km are biked or walked by 2050.



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CLIMATE SHIFT 3

EMISSIONS NEUTRAL BUILDINGS

Buildings represent approximately 30% of Edmonton's greenhouse gas emissions. Approximately 80% of the buildings that will exist in 2050 have already been built. Both new and existing buildings need to reach a carbon neutral state in the future.

Examples of what could be pursued:

ALL HOMES AND BUILDINGS TO BE EMISSIONS NEUTRAL

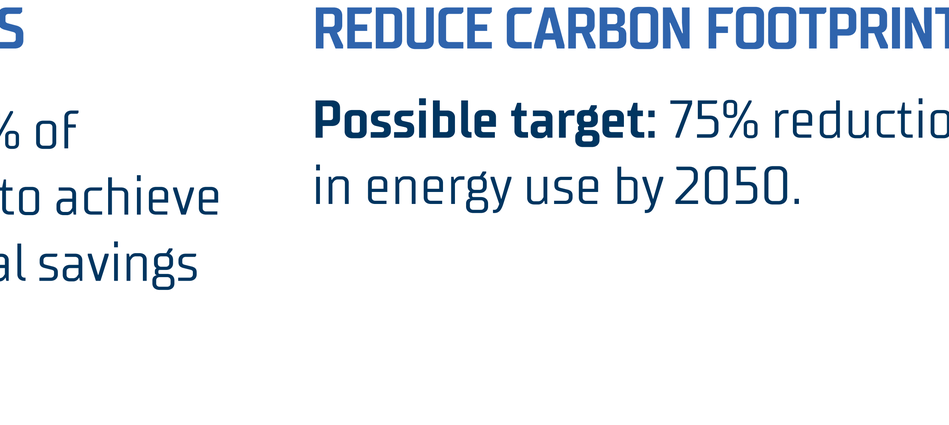
Possible target: All new buildings including homes and commercial to be net zero by 2030.

ALL EXISTING BUILDINGS TO BE RETROFITTED TO ACHIEVE THERMAL AND ELECTRICAL SAVINGS

Possible target: 100% of buildings retrofitted to achieve thermal and electrical savings of 50% by 2050.

ENCOURAGE INNOVATION IN INDUSTRY TO REDUCE PROCESS ENERGY AND REDUCE CARBON FOOTPRINT

Possible target: 75% reduction in energy use by 2050.



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CLIMATE SHIFT 4

RENEWABLE REVOLUTION & CIRCULAR ECONOMY

Zero emissions energy is required both to reduce existing emissions and to ensure no new emissions are added. Proven technologies like solar will need to be deployed at scale.

A circular economy and sustainable waste management practices including reducing waste at the source will be essential for a low carbon future.

Examples of what could be pursued:

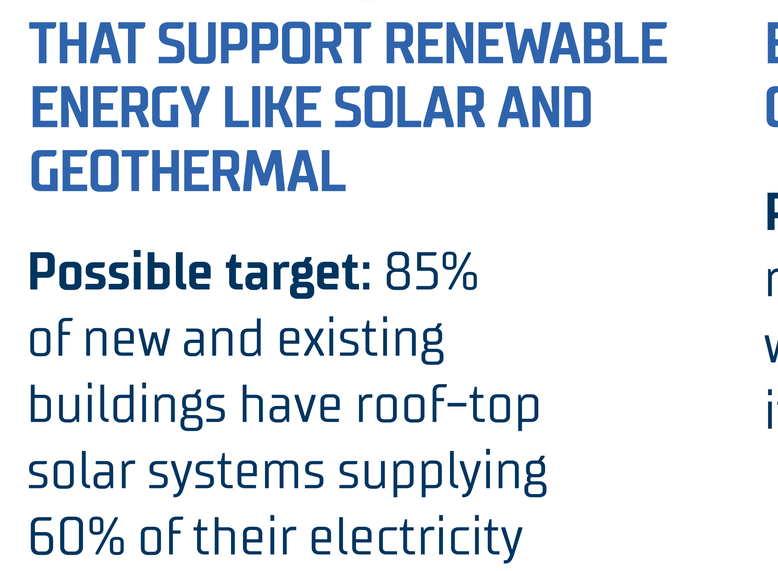
FACILITATE PROGRAMS THAT SUPPORT RENEWABLE ENERGY LIKE SOLAR AND GEOTHERMAL

Possible target: 85% of new and existing buildings have roof-top solar systems supplying 60% of their electricity needs by 2040.

ENABLE EMERGING ENERGY DISTRIBUTION AND GENERATION SYSTEMS

Possible target: Edmonton receives at least 110 MW of wind power (from outside its borders) by 2050.

DEVELOP PARTNERSHIPS AND STRATEGIES TO REDUCE FOOD WASTE IN THE EDMONTON REGION BY REDIRECTING, RESCUING AND COMPOSTING SURPLUS FOOD



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CLIMATE SHIFT 5

JUST AND EQUITABLE TRANSITION

A critical component is to ensure that all Edmontonians have access to the opportunities a low carbon future provides.

Attention to the reduction of energy poverty, gender equity and ensuring access to green jobs for the vulnerable populations will be critical.

Examples of what could be pursued:

IMPLEMENT PROGRAMS THAT HELP RESIDENTS (INCLUDING LOWER INCOME HOUSEHOLDS) REDUCE THEIR DAILY ENERGY USE AND CARBON FOOTPRINT

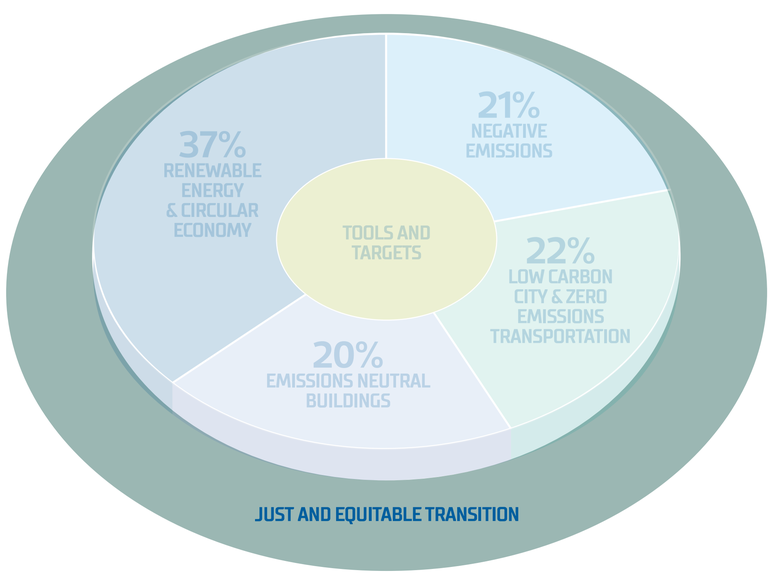
Examples may include:
Energy poverty reduction programs.

ENCOURAGE WOMEN, GIRLS AND GENDER MINORITIES COMMUNITIES TO PARTICIPATE IN MUNICIPAL MENTORSHIP, LEADERSHIP, AND GOVERNANCE

Examples may include:
Green job access programs.

CONSIDER THE EQUITY IMPACTS OF POLICIES, PROGRAMS, PUBLIC SERVICES, INVESTMENT AND INFRASTRUCTURE DELIVERY

Examples may include:
Employ approaches to include new Canadians in energy efficiency programs.



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CLIMATE SHIFT 6

NEGATIVE EMISSIONS

Even if Edmonton is able to aggressively reduce its overall greenhouse gas emissions, modelling suggests that there will still be residual emissions to manage. A combination of natural and technological solutions for direct removal of carbon and sequestration and/or utilization of that carbon is required.

Examples of what could be pursued:

PRESERVE AND RESTORE NATURAL AREAS AS CARBON SINKS

EXPAND EDMONTON'S TREE INVENTORY AND ENCOURAGE THE RETENTION AND ESTABLISHMENT OF DIVERSE NATIVE TREE SPECIES ON CITY AND PRIVATE LANDS

PARTNER WITH INDUSTRY TO PROVIDE OPPORTUNITIES TO RESEARCH, DEVELOP, AND SCALE NEW PRODUCTS FOR SEQUESTRATION AND UTILIZATION OF CARBON

PROVIDE INCUBATOR SERVICES FOR EDMONTON START-UPS THAT ARE FOCUSED ON EMISSIONS REDUCTIONS, CLIMATE ADAPTATION AND INNOVATIVE TECHNOLOGIES TO REDUCE CARBON FOOTPRINT

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