

CLIMATE ACTION PLAN: Residential GHG Reduction Plan for the City of Stratford

The carbon we emit must be equaled by the carbon we absorb to become carbon neutral, and therefore to reduce the current imbalance. For residential properties, this means a combination of reducing GHG and increasing the amount of carbon sequestration by adding trees, shrubs and other vegetation that absorbs carbon.

In Stratford, approximately 14% of greenhouse gases are produced on residential properties, meaning that a total of 44,300 tonnes of CO₂e are created from the homes and yards of Stratford residents (2017 baseline). The following are ideas for the City to encourage GHG reductions for both buildings and properties to support Stratford residents.

Residential buildings - privately owned

The following programs would allow the City to encourage homeowners and residents to reduce their carbon footprint.

Short term:

1. **Access to home energy use assessments.** Many residents may not know what they need in terms of reducing their home's carbon footprint. Currently, we don't have anyone offering this service in Stratford, and having home assessments and follow-up options would be fantastic and perhaps is worth hiring someone to do this for a year.
2. **Encouraging energy efficient retrofitting** to improve the efficiency of existing single family dwellings - provide encouragement and/or incentives for environmentally friendly home renovations, and create a list of programs or suppliers who provide energy efficient alternatives for single family homes. Encourage conversion to more efficient heating and cooling equipment, for example, electric tankless water heaters. This new equipment subsidized, or give homeowners a grant towards installation (the City could partner with Festival Hydro for this type of program). As carbon taxes level the playing field between gas and electric heat, provide incentives to convert to heat pump technology.
3. **Energy efficiency kits and education materials** for low and moderate income households - partner with Festival Hydro or Enbridge/Union Gas, and add this information to the City website *There could be an energy efficiency kit hand out day in the city to promote.
4. **New multi-unit build requirements.** Require all new multi-unit buildings ENERGY STAR efficiency standards, as well as include electric vehicle charging stations, green or solar roofs, and other energy saving measures.
<https://www.nrcan.gc.ca/energy-efficiency/energy-efficiency-buildings/energy-efficiency-buildings/energy-starr-multifamily-high-rise-pilot-program/21966>
5. **Net Zero building standards.** Require that all new housing applications for development conform to Net Zero energy standards currently being developed by the Government of Canada. All new builds should be passively heated and cooled, or

heated and cooled through a district passive heat system and heat pumps, with net zero energy design or readiness. The City could partner with the federal government to help develop the new building codes while positioning Stratford as THE place to go for energy efficient home design. While energy efficiency is slightly more expensive in the short run, as long as ALL builders face the same requirements, there is no disincentive to follow these rules. The federal government has indicated that federal grants will soon be available to build this way.

Medium/Long Term:

6. **Energy Transition Acceleration Grants:** Provide grants for homeowners who switch to green energy in their homes. Possibly pursue a City partnership with environmental agencies to provide and oversee these grants. See Eco-City Edmonton as an example. <http://www.albertaecotruster.com/ecocityedmonton/>
7. **Renewable energy co-op program:** Create a cooperative model that homeowners can invest in to provide additional renewable energy sources. <http://www.oxford-cec.ca/page-1741085>
8. **District heating for residential homes** via municipal power plants, possibly re-using heat created by industry

Outdoor Yard and Garden – privately owned

These programs can strengthen the environmental health of private property in the City. This can not only improve carbon sequestration in the City, but will also provide many other environmental benefits to people and wildlife in Stratford.

Short term:

1. **LID Requirements for new builds:** Low Impact Designs for subdivisions and other multi-unit builds using site design techniques that store, infiltrate, evaporate, and detain runoff. Use of these techniques helps to reduce off-site runoff and ensure adequate ground-water recharge. Methods used can include permeable pavement, water retaining vegetation, and drainage designed to direct runoff into gardens.
2. **Tree planting initiative with Festival Hydro:** TREE POWER, a partnership between Festival Hydro, UTRCA and the E&E Advisory Committee, is scheduled to begin in the spring of 2021. Trees sold to homeowners at a discounted rate (\$20) with the rest of the cost, plus distribution, provided by Festival Hydro. City promotion and support of this initiative would ensure success.
3. **Urban forestry:** Create a sustainable plan that includes a greenspace and woodlot inventory as well as planning, planting, protection, maintenance, management and care of trees, forests and greenspace along with related resources in and around the City. Urban forests are defined as trees, forests, greenspace and related abiotic, biotic and cultural components in areas extending from the urban core to the urban-rural fringe. A partnership can be formed with UTRCA and other forestry experts. The last natural inventory that this group could locate is named

“SNHI-Complete_Report.pdf: City of Stratford: Natural Heritage Inventory (June 2004).

4. **Protecting mature trees on private property:** A new initiative called **Tree Trust** was recently launched in Stratford and Perth County to provide support and funding for the management and care of mature trees on private property. City support, endorsement and promotion of this program would help to strengthen this new program. A mature tree, once it has grown, has the potential to absorb about 48 pounds of carbon dioxide per year. <https://treetrust.ca/>
5. **Food forests:** Create more public edible gardens in our park spaces:
<https://www.cbc.ca/news/technology/what-on-earth-food-forests-1.5660211>
6. **Native gardens:** Encourage homeowners to abandon lawns and create vegetable gardens, native meadows that attract pollinators and create curb appeal while eliminating emissions from mowing. Provide information and support, such as native planting guides on the City website - see City of Guelph:
<https://guelph.ca/living/house-and-home/lawn-and-garden/sample-garden-designs/native-gardens/>
7. **Reduce or eliminate 2-stroke engine use:** Create bylaw limiting the use of gas powered leaf blowers and other heavily polluting two-stroke engine garden tools (use phased out over a few years).

Residential - public housing

This includes residential homes that are owned by the City.

1. Replace items (ex: lightbulbs, windows, small appliances, etc) with more **energy efficient models** when required and track the energy savings.
2. **Create community gardens** for residents to grow their own food
3. **Advocate the Provincial government** to require new builds to have minimum LEED standards or be Passive House (PHI and PHIUS). EnerPHit and NetZero building standards exist, are practical, and are cost effective.

All existing municipal properties: create a “greening” plan that could include additional trees and native planting, edible gardens and applying LID solutions/upgrades for driveways and paved areas.