

Formula for Council to meet its 80% corporate greenhouse gas emissions reduction target.
(all emissions figures are per year)

Council emissions 2016-17	3,112 tonnes CO ₂ e
Annual emissions consistent with 2021-22 target	2,500 tonnes CO ₂ e
Additional reductions to find	612 tonnes CO₂e

1 Complete LED streetlights programme - high priority for 2018-21 LTP.
Reduction potential (all lights) ~ **230 tonnes CO₂e**

2 Renewable heating (heat pumps) at Ōtaki and Waikanae Pool

Waikanae Pool ~ **110 tonnes CO₂e**

Ōtaki Pool ~ **180 tonnes CO₂e**

Recommend consideration of these in 2018-21 to help reach target. Otherwise, when existing boilers need replaced. Waikanae Pool's boiler is the older of the two.

3 Electric vehicle first policy (ala GWRC) - can be implemented immediately

Reductions of complete conversion of fleet to EV:

Petrol vehicles (light fleet) ~ **73 tonnes CO₂e**

Diesel (heavy fleet incl vans) ~ **286 tonnes CO₂e**

Complete conversion of fleet may not be practical by 2021-22, but significant progress could be made e.g. 25-50% conversion

25% fleet conversion ~ **90 tonnes CO₂e**

50% fleet conversion ~ **180 tonnes CO₂e**

4 Carbon forests on council land - high priority for 2018-21 LTP

Plant forests and put into the government Permanent Forest Sinks Initiative. Some existing forest owned by council is already eligible. 'Retire' the credits generated through the scheme to offset other council emissions.

5.6 Ha immediately South of Waikanae WTP – Eucalyptus. ~ **95 tonnes CO₂e**

5.2 Ha immediately adjacent to the above – plant natives ~ **34 tonnes CO₂e**

17.5 Ha Maungakotukutuku dam land – plant natives ~ **113 tonnes CO₂e**

Combined effect of four measures when all implemented: 1125 tonnes CO₂e, enough to meet the emissions reduction target with a significant contingency.

Other complementary/substitute measures to consider:

- Energy efficiency improvements in buildings and at treatment plants
- Solar electric panels (PV) on buildings and at treatment plants
- Establishing other areas of forest, e.g. in water supply catchments
- Seek lower-emissions disposal routes for solid waste. (These emissions are strongly influenced by which landfill the waste goes to).
- e-Bikes for staff travel

Council will also benefit from national efforts to achieve the target of 100% renewable electricity by 2025. Emissions from electricity use would reduce to close to zero if this target is achieved.

Achieving full carbon neutrality by 2025

With 100% renewable electricity, taking actions 1-4 described above and continuing conversion of the vehicle fleet to 100% electric, the council's emissions would be approximately 980 tonnes CO₂e, 92% below baseline. Carbon neutrality could be achieved by further offsetting (e.g. with forests) of these remaining emissions and (optionally), reducing waste emissions by using an in-vessel anaerobic digestion process to compost sewage sludge.