

The Energy Future of Christchurch City's Commercial and Council Facilities

GHAZ Aquifer Heat Pump Seminar 17th October 2017

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Council Facilities and Operations

Resource Efficiency and Greenhouse Gas Emission Programme

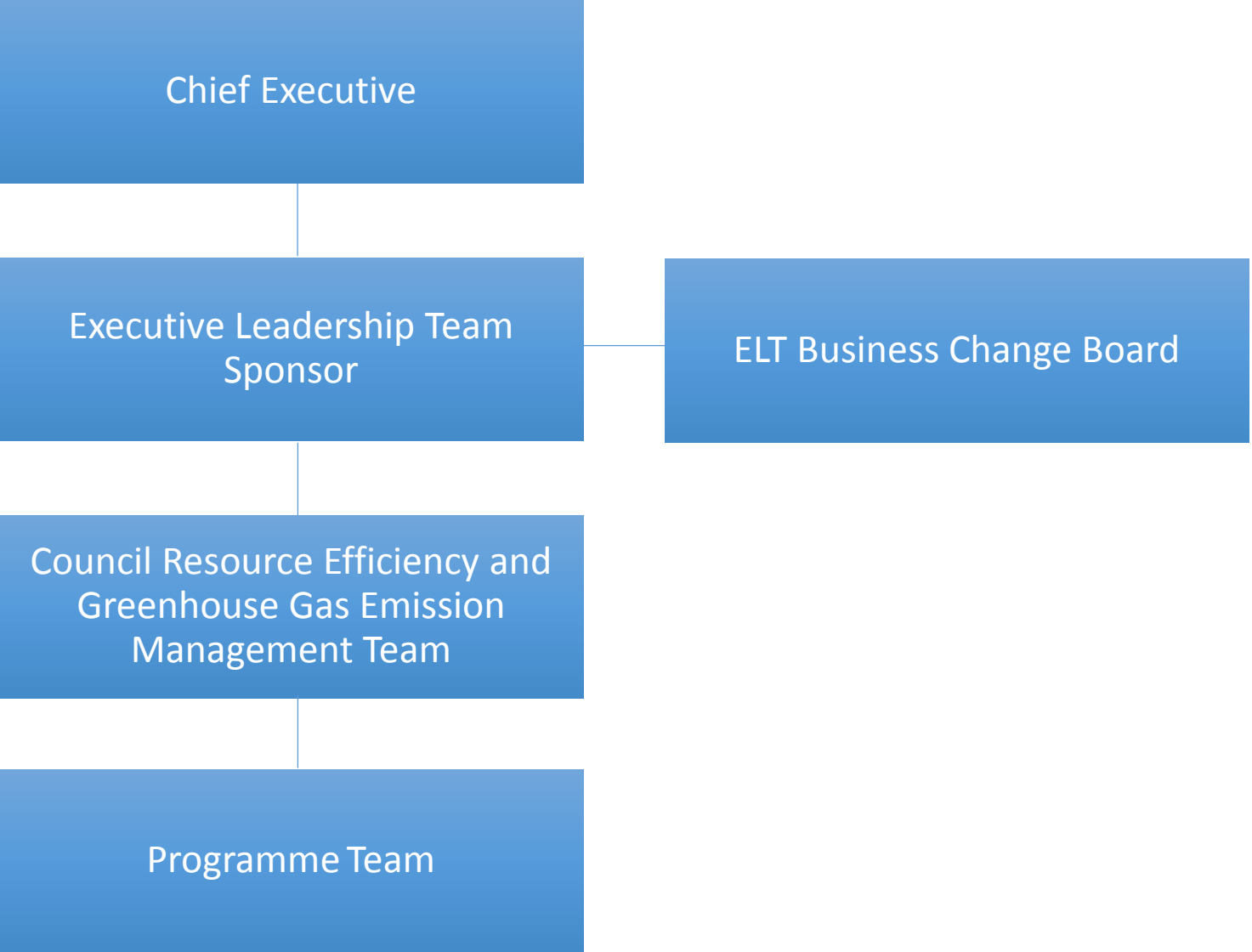
- Measurement and management framework for energy use, GHG emissions, solid waste generation and water use from Council activities
- Internal Council Policy for this programme of work
- Management Team and Programme Team structure
- Certification: Energy-Mark Gold (ISO 50001)



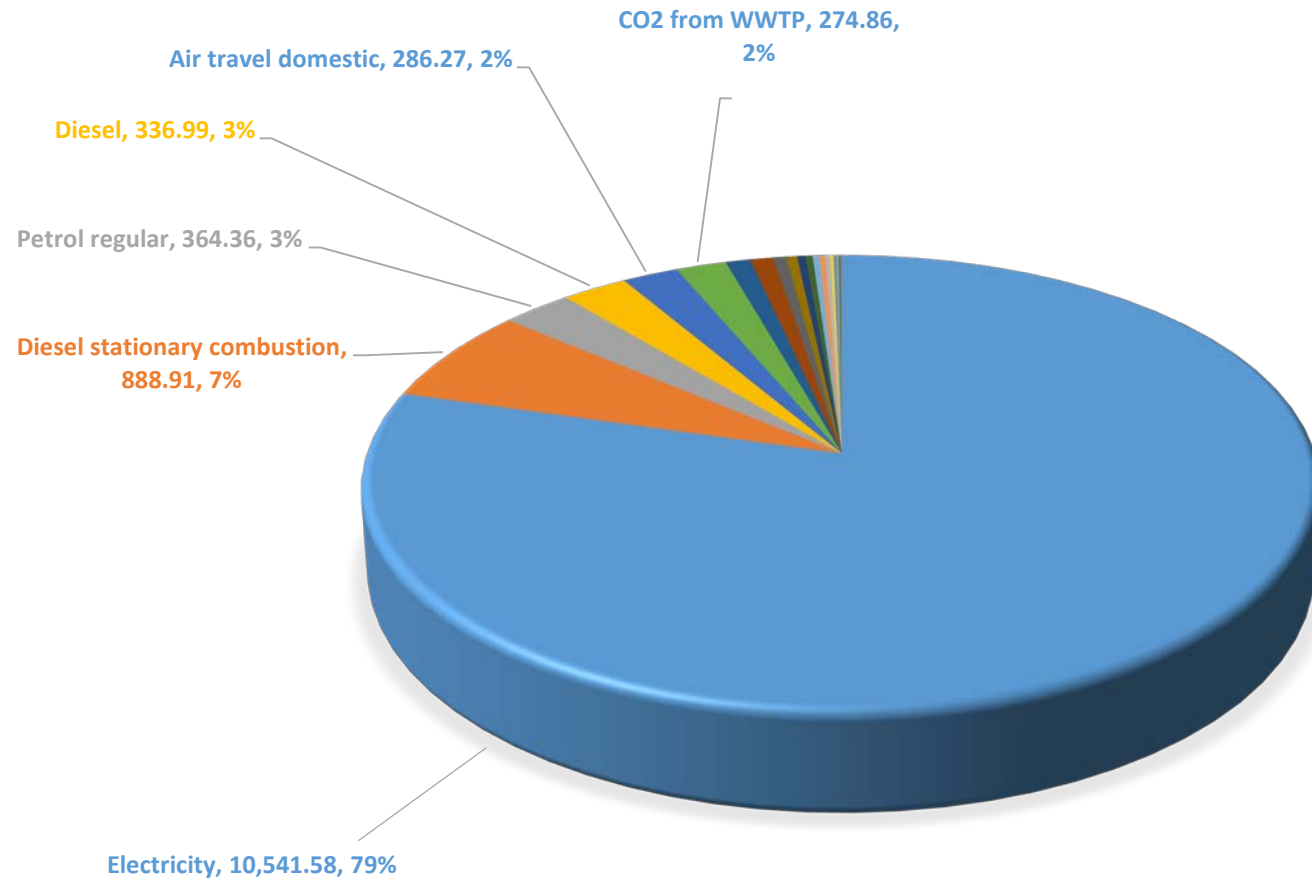
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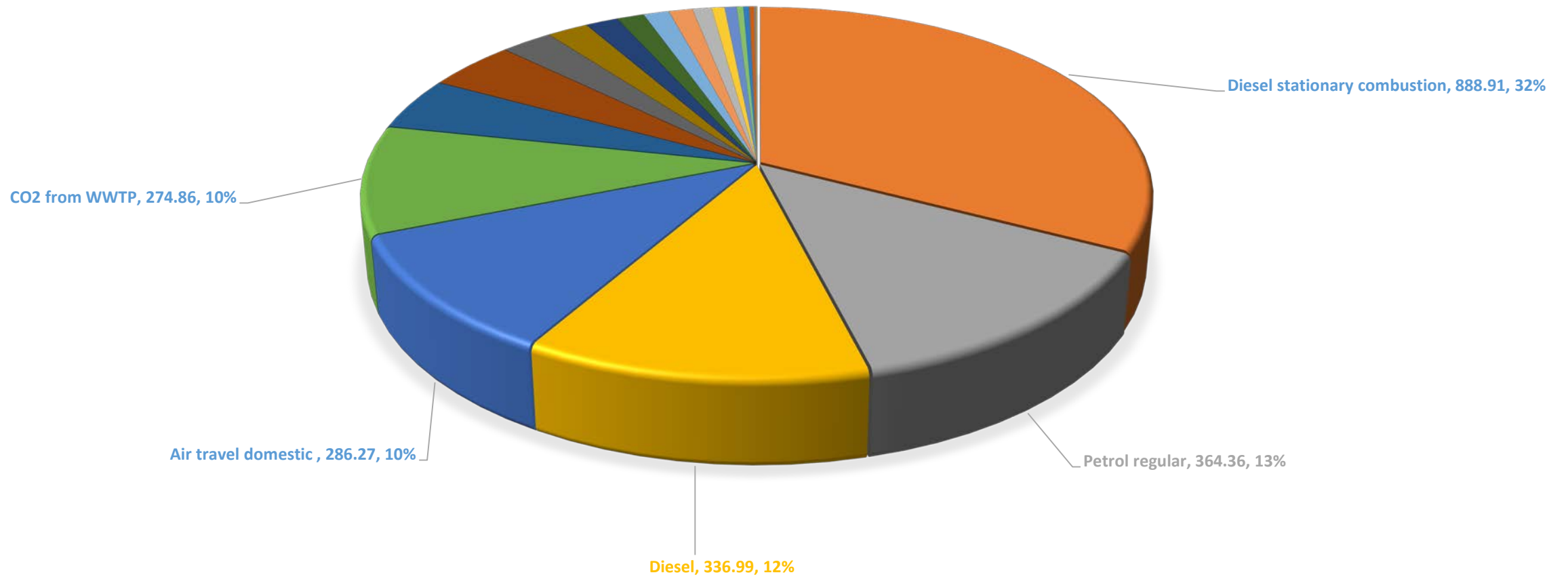
Management Team and Programme Team Structure



2015/2016 Total Emissions: 13,283 tCO₂e



2015/2016 Total Emissions (tCO₂e) (Excluding electricity)



Council Energy Efficiency and Emission Reduction Initiatives

- Energy efficiency design, audits and feasibility studies – EECA Collaboration Agreement
- Proposed conversion of streetlights to LEDs
- 100% battery electric car sharing scheme – 52 compact internal combustion cars

Council Energy Efficiency and Emission Reduction Initiatives

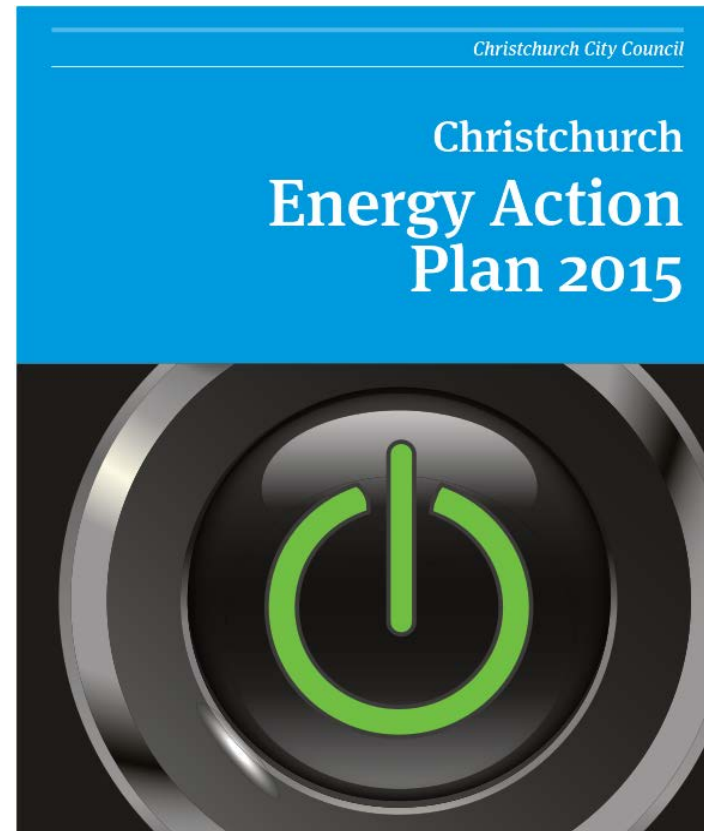
Artesian ground source heat pump system

- Town Hall
- Central Library
- Botanic Gardens Visitor Centre/Cunningham House – Investigating

Christchurch City

2015 Christchurch Energy Action Plan

- An increase in the share of renewable energy used in the total energy mix
- A reduction in the total energy used



Christchurch City

Energy Action Plan Programme areas

1. Internal Council Energy Management Programme
2. Commercial Energy Efficiency and Renewable Energy Programme
3. Residential Building Energy Efficiency and Renewable Energy Programme
4. Transport Energy Efficiency and Renewable Energy Programme
5. Christchurch Energy Use Measuring Programme
6. Energy Efficient and Renewable Energy Christchurch Tourism Programme

Christchurch City – GHG Emissions

Council Strategic Priority – Climate Change Leadership

- GHG emissions footprint for 2016/2017
- Strategic Priorities Action Plan for Climate Change Leadership
- Global Covenant of Mayors for Climate and Energy

Christchurch - Energy Efficiency and Emission Reduction Initiatives

- Enabling and promoting active modes of transport
 - Major cycle routes
 - Local cycleways
 - Travel demand management
- City-wide 100% battery electric car sharing scheme
- Electric vehicle charging infrastructure roll-out

Christchurch - Energy Efficiency and Emission Reduction Initiatives

Artesian ground source heat pump system

- Arts Centre – Christchurch Agency for Energy funding support
- The Terrace – Christchurch Agency for Energy funding support
- West End – Christchurch Agency for Energy funding support
- Environment Canterbury
- Bus Interchange
- Justice Precinct
- Conference Centre

Energy and Emission Reduction Future

1. Efficient use of energy
2. Innovative energy supply solutions
3. Low or zero GHG emission energy
4. Zero tail pipe emission transport