



City of Hamilton
PUBLIC WORKS COMMITTEE ADDENDUM

Meeting #: 19-008
Date: June 3, 2019
Time: 9:30 a.m.
Location: Council Chambers, Hamilton City Hall
71 Main Street West

Alicia Davenport, Legislative Coordinator (905) 546-2424 ext. 2729

	Pages
9. STAFF PRESENTATIONS	
9.1 2018 Annual Energy Report (PW19043) (City Wide)	
*9.1.a Added Presentation	2
12. NOTICES OF MOTION	
*12.1 Appointment to the Waste Management Advisory Committee	16

PW19043
Item 9.1



2018 Annual Energy Report

June 3, 2019

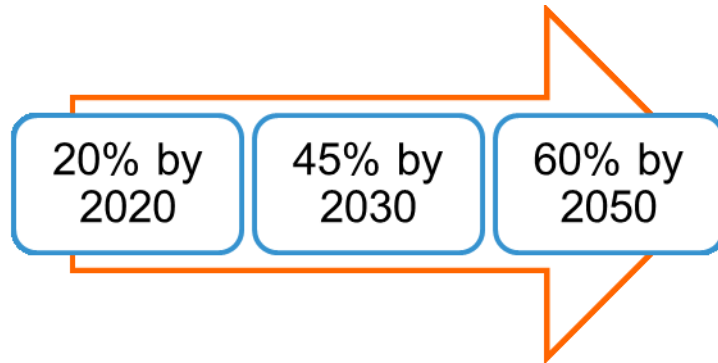
Introduction

- The Annual Energy Report for 2018 is intended as a detailed review of the past 12 months of activities as they relate to energy usage, costs, energy performance, procurement efforts and conservation initiatives for corporate assets.
- The greenhouse gas emissions reductions and inventory report for the 2017 calendar year is also included.

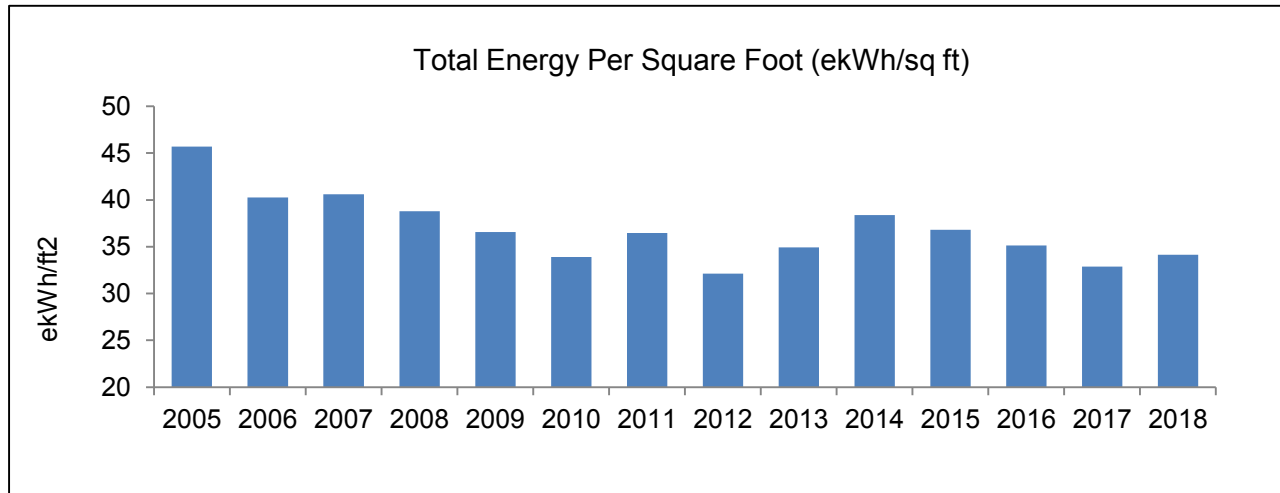
Corporate Energy Policy

- The policy is designed to:
 - act as a guideline for making energy-related decisions as it pertains to corporate assets;
 - facilitate the achievement of city-wide energy intensity and emissions reduction targets;
 - define policies for capital investment, energy procurement, renewables;
 - address legislative requirements.

Energy Intensity Reduction Targets



2018 - Energy intensity reduction of 25%

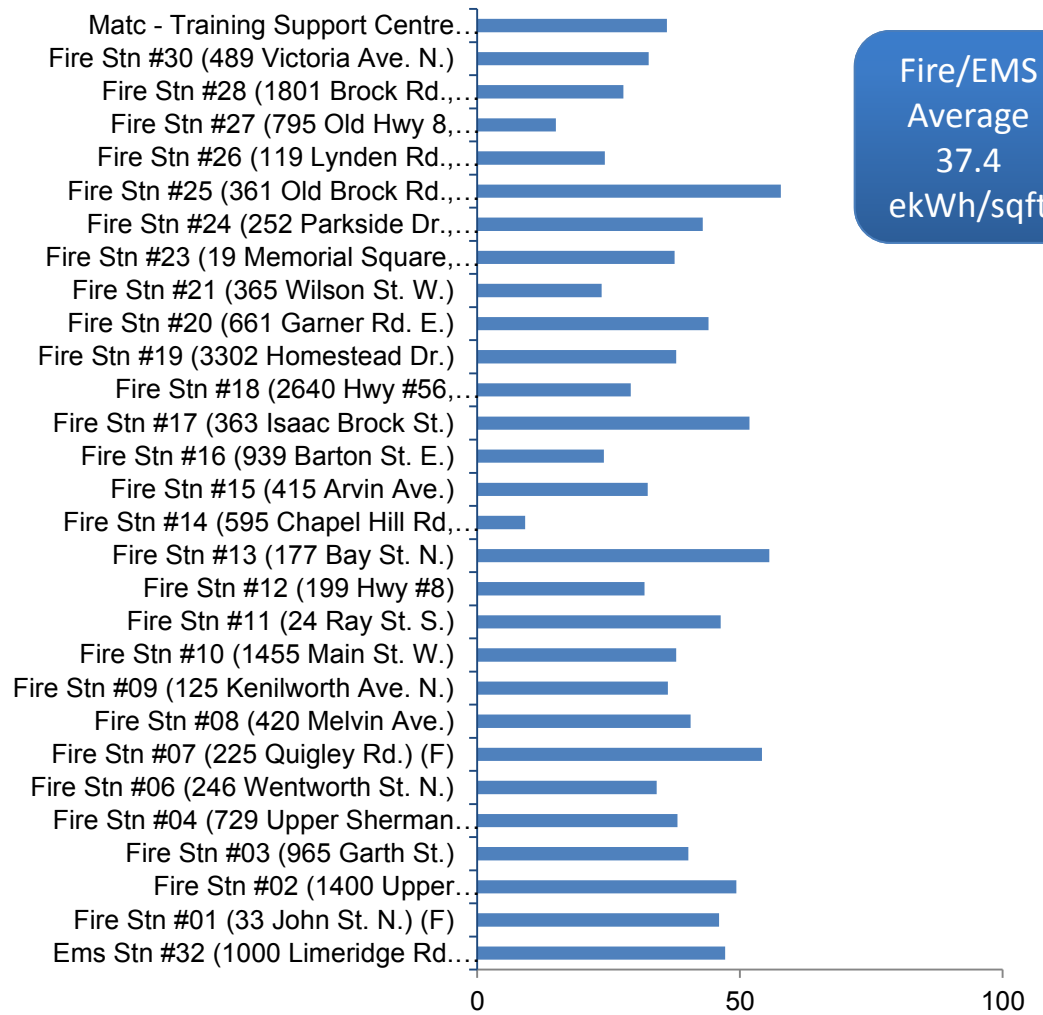


Energy Intensity Per Portfolio

Sample of Energy Intensity by property for EMS & Fire

City Wide Energy Intensity Average of **34.13** kWh/sqft

Fire/EMS Energy Intensity (ekWh/sqft)

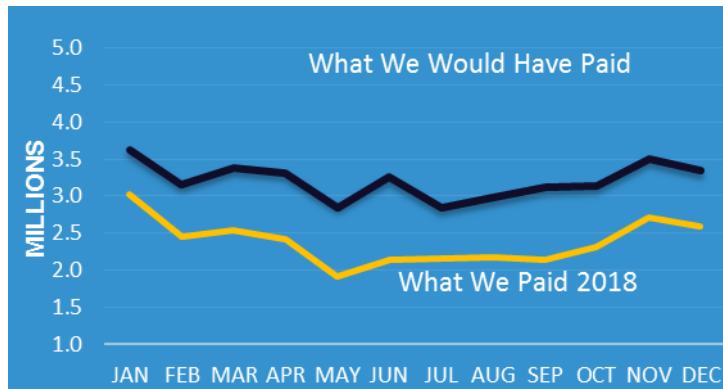


Fire/EMS Average 37.4 ekWh/sqft

* Details Found in Appendix

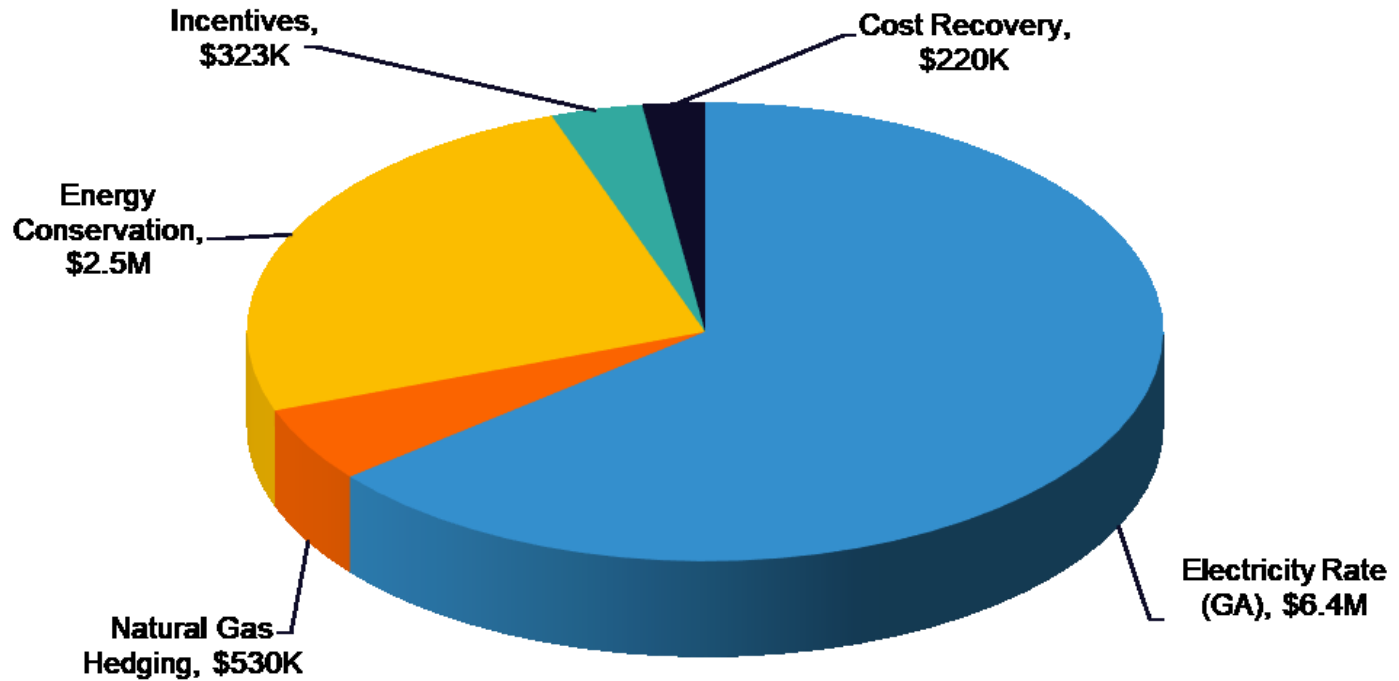
Energy Strategies and Programs

Energy Strategies & Programs resulted in **\$9.9M savings and avoided costs** for 2018.



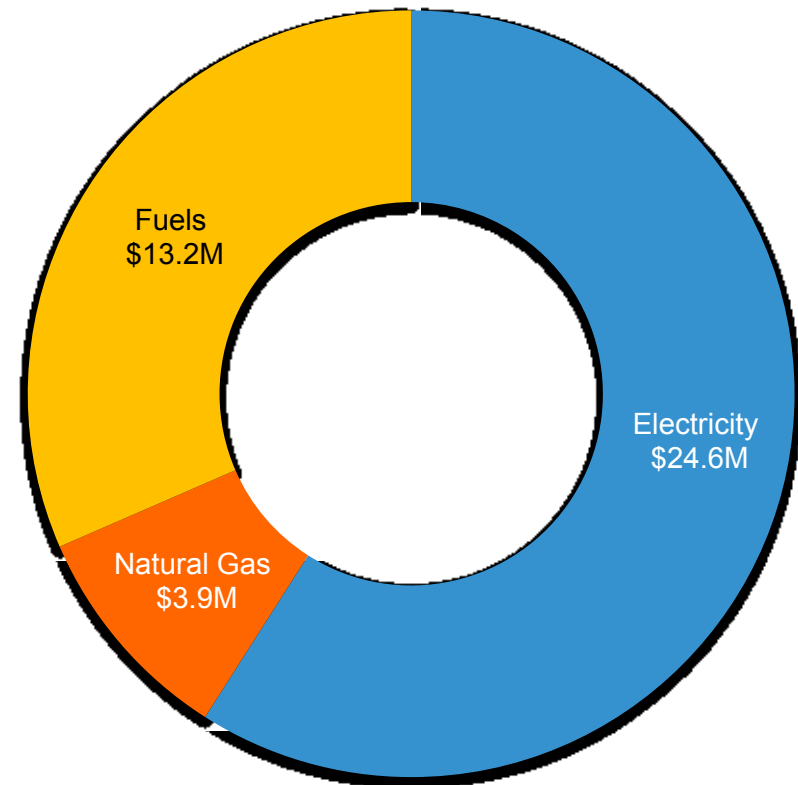
- Utility Rates & Commodity Strategies
 - Global Adjustment
 - Hedging
- Cost Recovery
 - Billing/rate errors and corrections
 - Tax recovery programs
- Energy Conservation & Incentives Programs
 - Savings achieved from energy efficiency projects
 - Incentives received

Breakdown of Energy Strategies and Programs - 2018





Overall Costs: Electricity, Natural Gas & Fuels - 2018

- Facilities costs incurred by City-owned buildings/sites and exclude City Housing Hamilton. Sites linked to the district energy system with utility costs provided from HCE are included in electricity and natural gas respectively.
- Fuels include diesel, unleaded gasoline and CNG for all Transit and Fleet operations but does not include Hamilton Police Services or Darts.
- Sites with partial data may be excluded.



Facilities

- Overall Combined Electricity and Natural Gas consumption was 2%  over 2017.
- Overall Combined Electricity and Natural Gas cost was 5.6%  than 2017.

Combined Consumption and Cost Comparison

Total Energy Overview				Comparisons	
	2005	2017	2018	2018 vs 2005	2018 vs 2017.
Total Energy (ekWh)	400,722,256	343,345,087	350,049,621	-13%	2.0%
Total Energy Cost (\$)	\$27,177,303	\$30,277,305	\$28,580,942	5%	-5.6%
Total Energy (\$/ekWh)	\$0.068	\$0.088	\$0.082	20%	-7.4%



Vehicle Fuels

- Corporate Average Fuel Economy (CAFE)

CAFE 2018 to base Year Comparison

Diesel Litre Equivalent (DLE) per 100 KM	BASE (2012)	2018
Unleaded Gasoline	20.7	19.4
Diesel	54.5	54.1
CNG	66.2	70.7
Total	46.2	44.8
Overall % Changed in DLE/100 KM		-3%

- Fuel Costs and Consumption

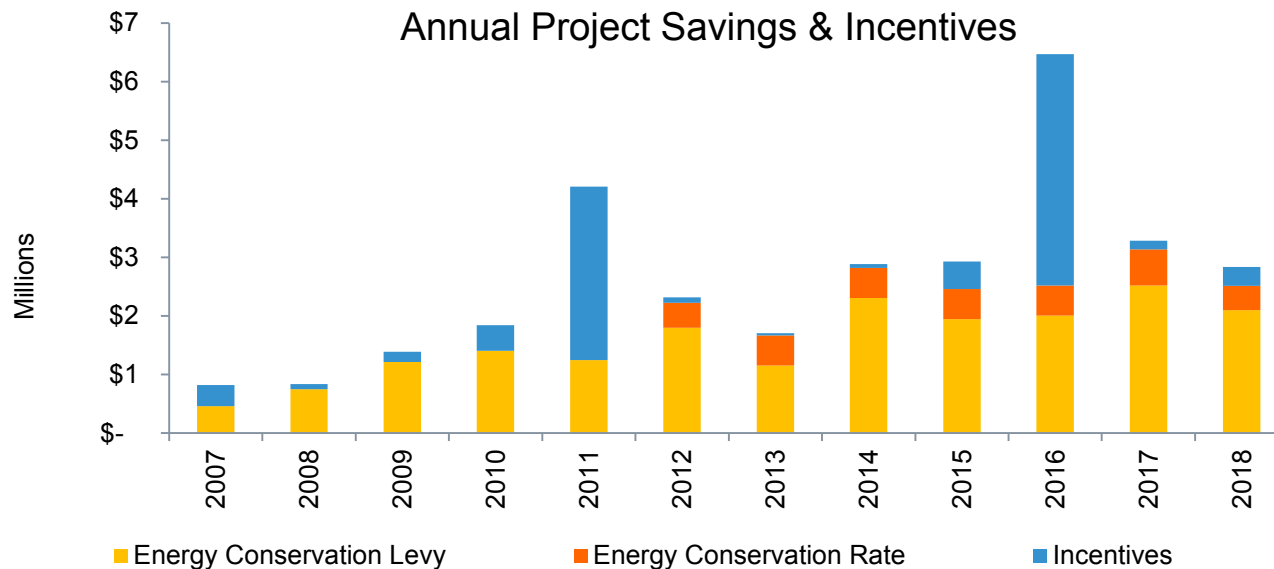
- Consumption overall 5%  than 2017
- Cost overall 15%  than 2017

2018 Cost and Consumption of Fuels

Fuel Type	Consumption Litres	Cost	Average \$/L
Diesel	9,172,662	\$ 9,752,970	\$ 1.06
Unleaded Gasoline	2,248,360	\$ 2,372,824	\$ 1.06
CNG (DLE)	5,104,215	\$ 1,032,545	\$ 0.20
Total	16,525,237	\$13,158,339	

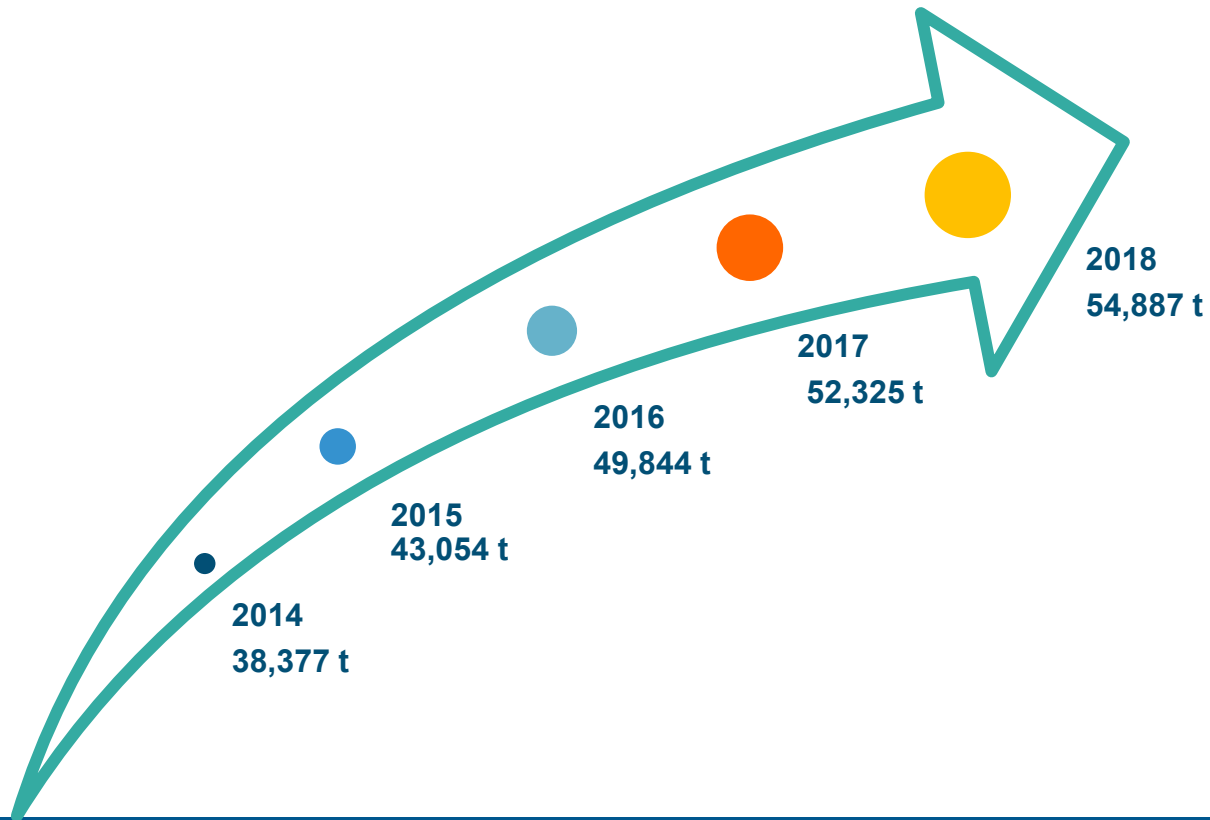
Energy Conservation

- Energy Efficiency Projects
- Incentives



- Energy efficiency project work often has the added benefit of GHG Emissions reductions

Cumulative GHG Reductions from Energy Conservation Projects in tCO₂e



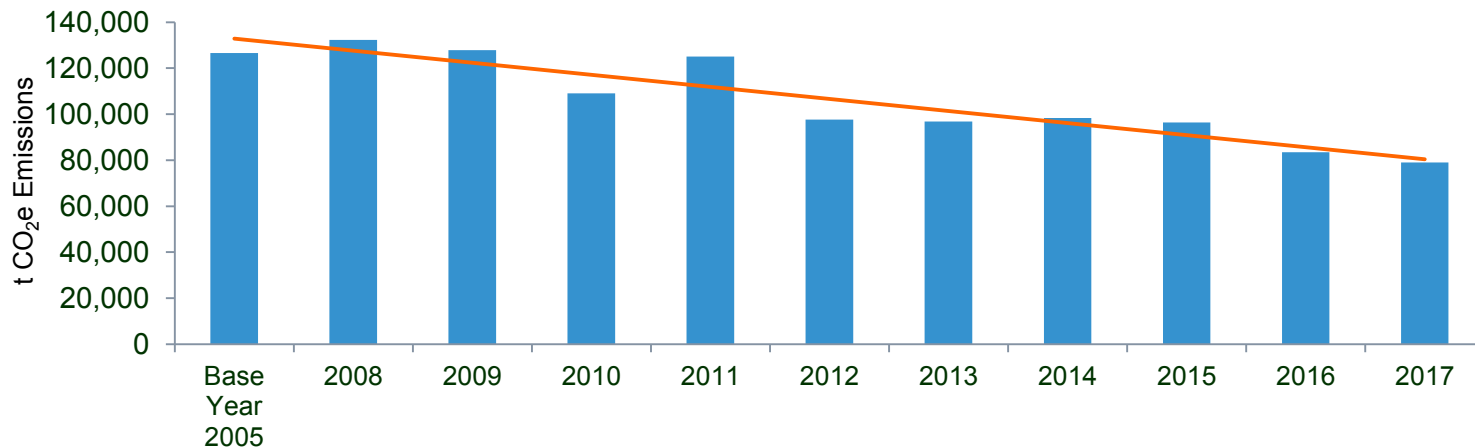
GHG Emissions 2017 Report

Targets outlined in the CEP

Year	Emission Reduction & Offset Target
2020	20%
2030	50%
2050	80%

2017 Inventory of 79,028 tonnes CO₂e = **38%** Decrease from 2005

City of Hamilton Corporate GHG Emissions Annual Trend (tCO₂e)



Final Thoughts

- Several factors impact success of initiatives:
 - Regulatory changes;
 - Funding & budget constraints;
 - Market factors; and
 - Behavior and attitude.

Key is to keep targets in sight and focus efforts to reduce usage and carbon footprint of corporate facilities.

What's New?

- Mayor's declaration on Climate Change; and
- Revision of the Corporate Energy Policy document.

12.1

CITY OF HAMILTON

NOTICE OF MOTION

Public Works Committee: June 3, 2019

MOVED BY COUNCILLOR N. NANN.....

Appointment to the Waste Management Advisory Committee

That Councillor N. Nann be appointed to the Waste Management Advisory Committee for the balance of the 2018-2022 Term of Council.