

Greenhouse Gas (GHG) Emissions



November 18, 2020

Quercus Consulting, Inc.

Kelly Shelton, President



Today's Presentation

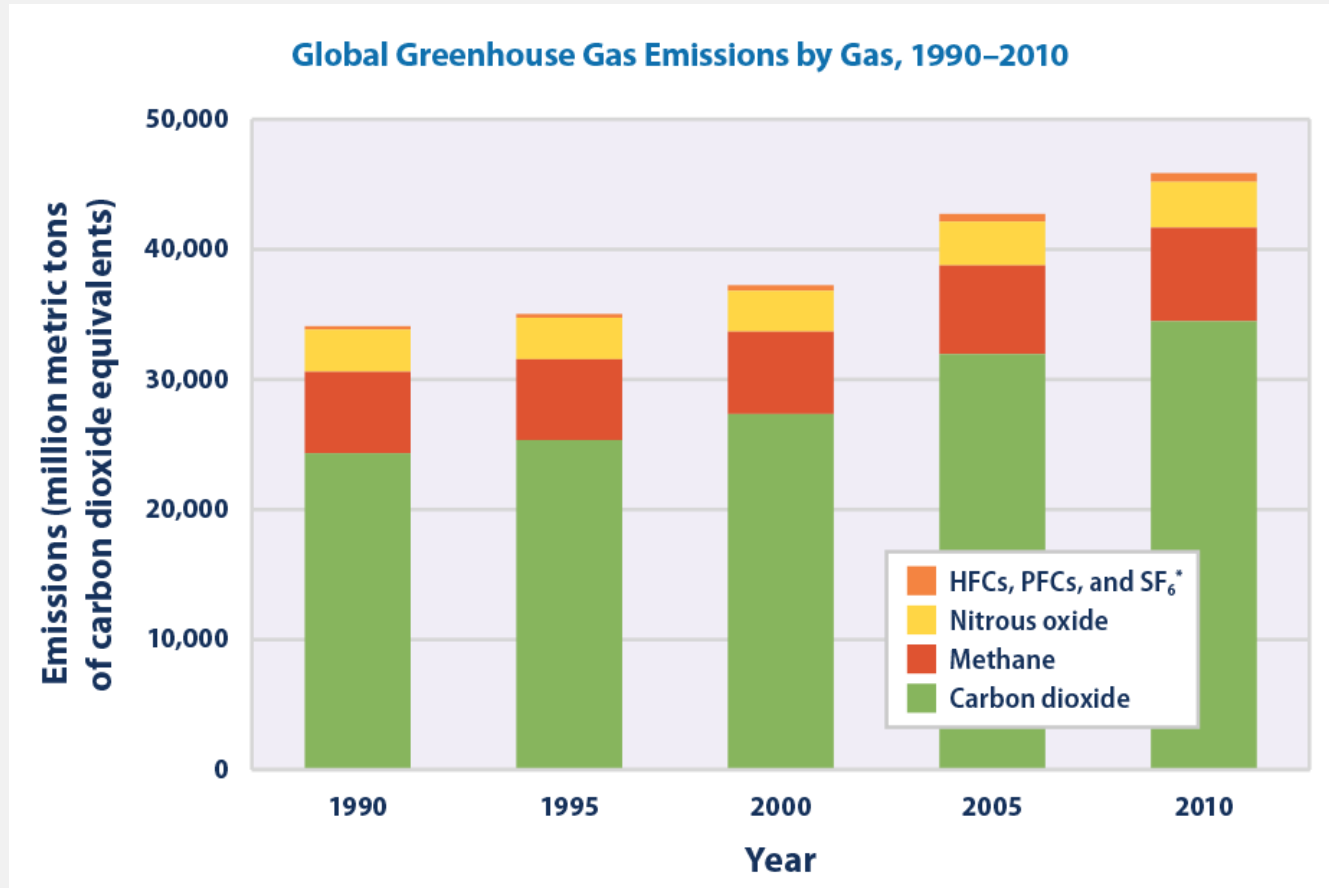
- A Little Background
- The Numbers
baseline and progress
- The Breakdown
how we arrive at the numbers
- The Goal and How We Get There

Greenhouse Gas Emissions

- Greenhouse gases trap heat and make the planet warmer.
- Human activities are responsible for almost all of the increase in greenhouse gases in the atmosphere over the last 150 years.¹
- The largest source of greenhouse gas emissions from human activities in the United States is from burning fossil fuels for electricity, heat, and transportation.

¹ *Intergovernmental Panel on Climate Change*

Global GHG Emissions 1995-2010



Source: World Resources Institute and Food and Agriculture Organization

The 3-Year Sustainability Plan



GHG Emissions – The Numbers

SOURCES

minus

RECYCLING

minus

RENEWABLE ENERGY
CERTIFICATES/CREDITS

GHG Emissions Baseline

(in MTCO₂e)

SOURCES **312,260**

minus

RECYCLING **-19,951**

minus

RENEWABLE ENERGY
CERTIFICATES/CREDITS **-6,296**

equals

BASELINE: 286,012

GHG Emissions 2018

(in MTCO₂e)

SOURCES **312,837**

minus

RECYCLING **-18,398**

minus

RENEWABLE ENERGY
CERTIFICATES/CREDITS **-5,439**

equals

BASELINE: 289,000

GHG Emissions 2019

(in MTCO₂e)

SOURCES = **305,829**

minus

RECYCLING = **-18,070**

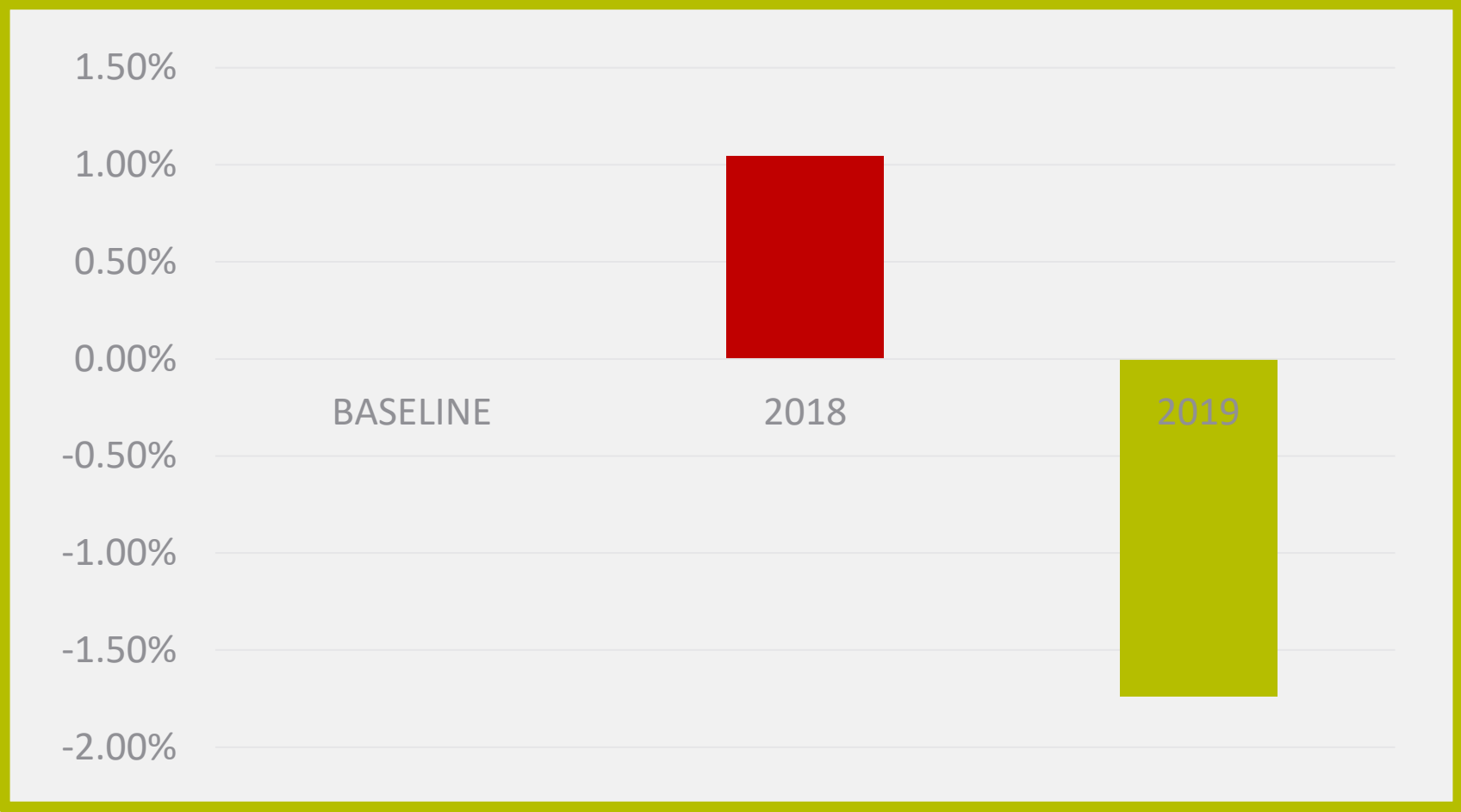
minus

RENEWABLE ENERGY
CERTIFICATES/CREDITS = **-6,712**

equals

BASELINE: 281,047

GHG Emissions Progress



Sources of Greenhouse Gas Emissions



Sources of Greenhouse Gas Emissions

Categories Measured for Highland Park



City

Residential

Commercial

City

Residential

Commercial

City Fleet

On-Road

Rail

City

Residential

Commercial

CREDITS of Greenhouse Gas Emissions

Categories Measured for Highland Park



City

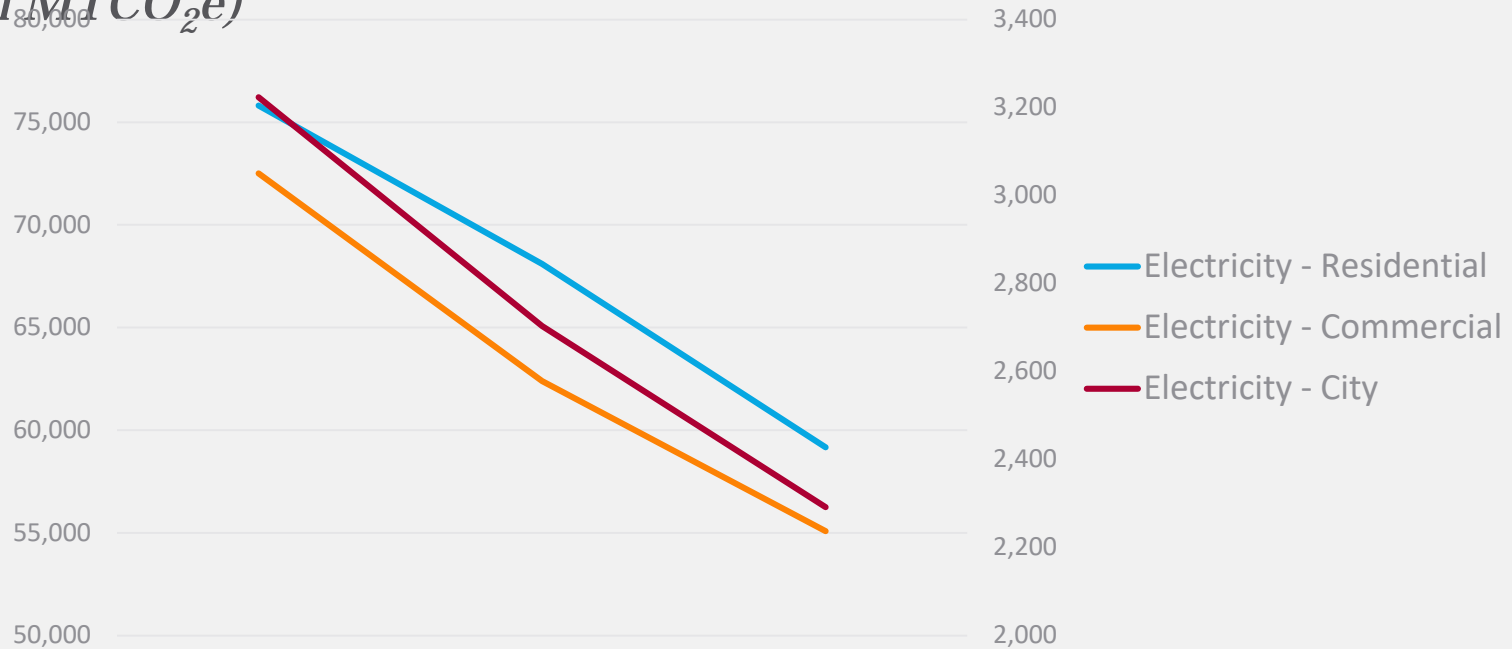
Residential*

Commercial

Purchased
Electricity

GHG Progress Breakdown – Electricity

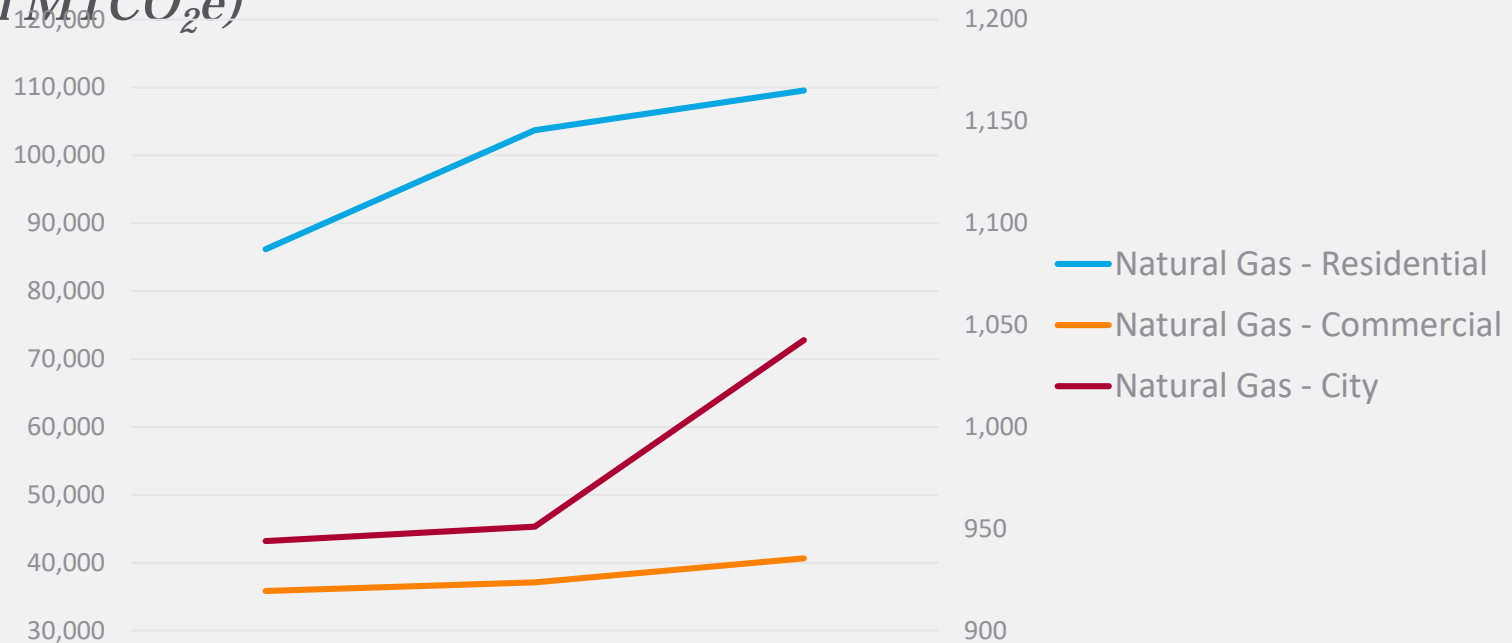
(in $MTCO_2e$)



Emissions Source	BASELINE	2018	2019
Electricity – City	3,223	2,703	2,292
Electricity – Residential	75,816	68,098	59,160
Electricity - Commercial	72,500	62,391	55,083

GHG Progress Breakdown – Natural Gas

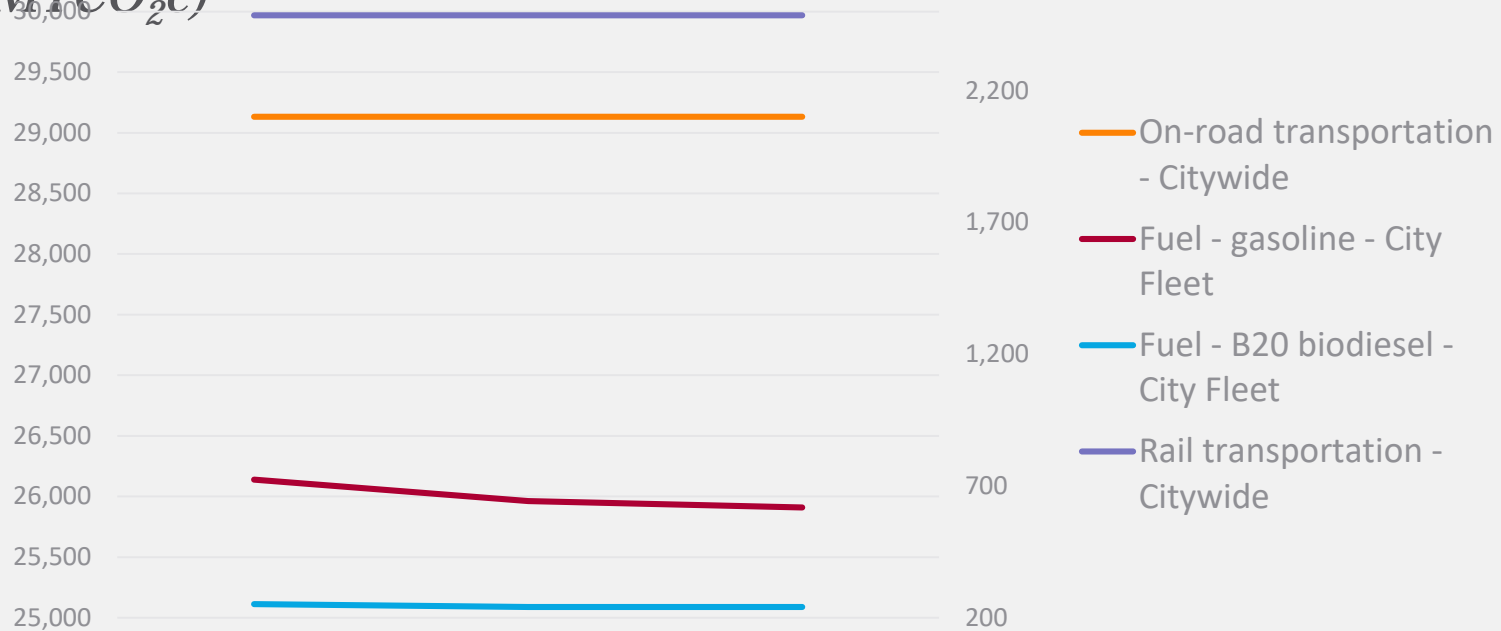
(in $MTCO_2e$)



Emissions Source	BASELINE	2018	2019
Natural Gas – City	944	951	1,043
Natural Gas – Residential*	86,162	103,710	109,569
Natural Gas – Commercial	35,842	37,106	40,660

GHG Progress Breakdown – Transportation

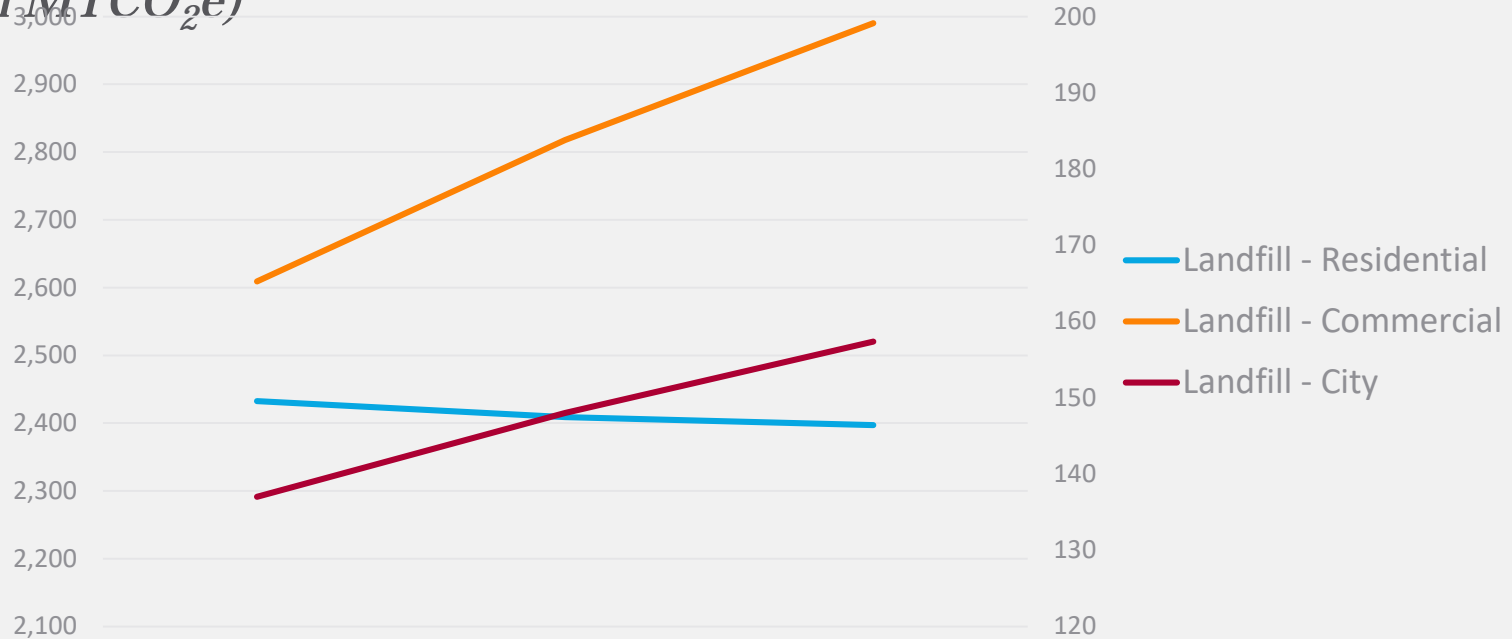
(in MTCO₂e)



Emissions Source	BASELINE	2018	2019
Fuel - Gasoline - City Fleet	724	643	618
Fuel - B20 biodiesel - City Fleet	251	241	241
On-road transportation - Citywide	29,133	29,133	29,133
Rail transportation - Citywide	2,486	2,486	2,486

GHG Progress Breakdown – Landfill

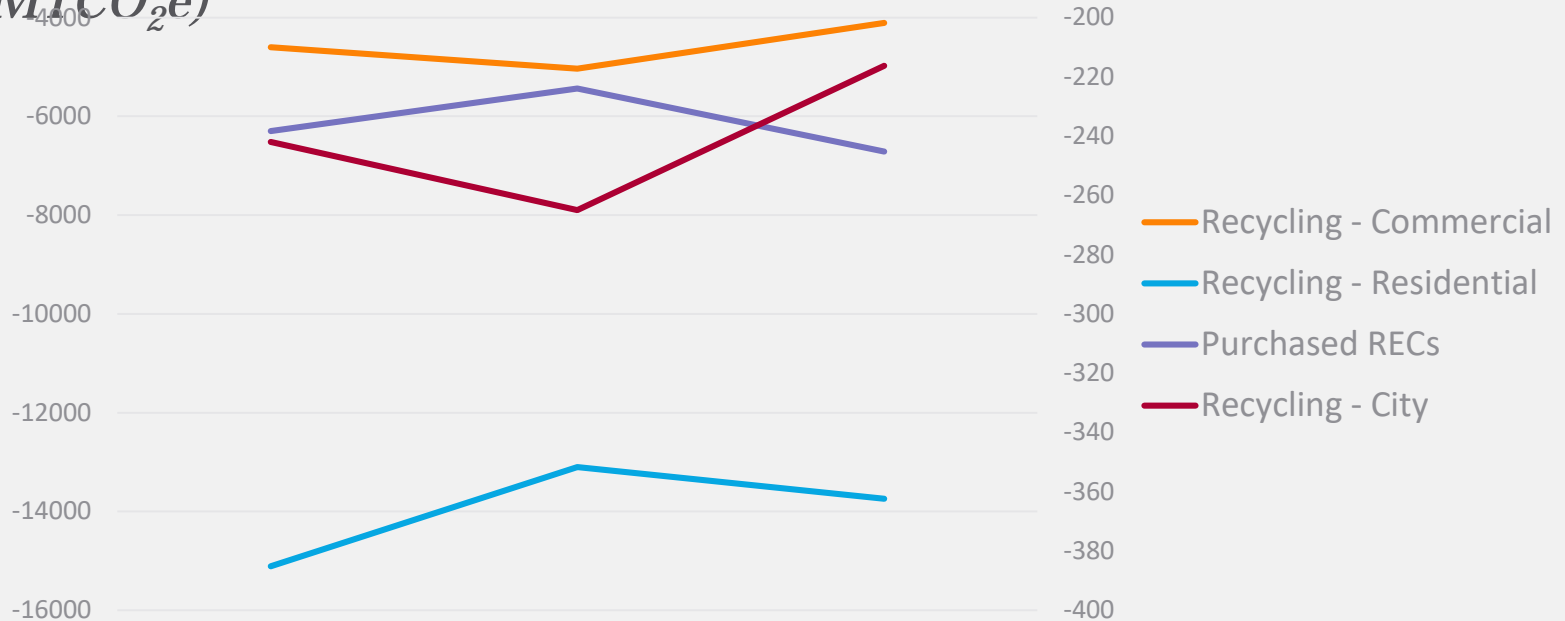
(in $MTCO_2e$)



Emissions Source	BASELINE	2018	2019
Landfill - City	137	148	157
Landfill - Residential	2,433	2,409	2,397
Landfill – Commercial*	2,609	2,818	2,990

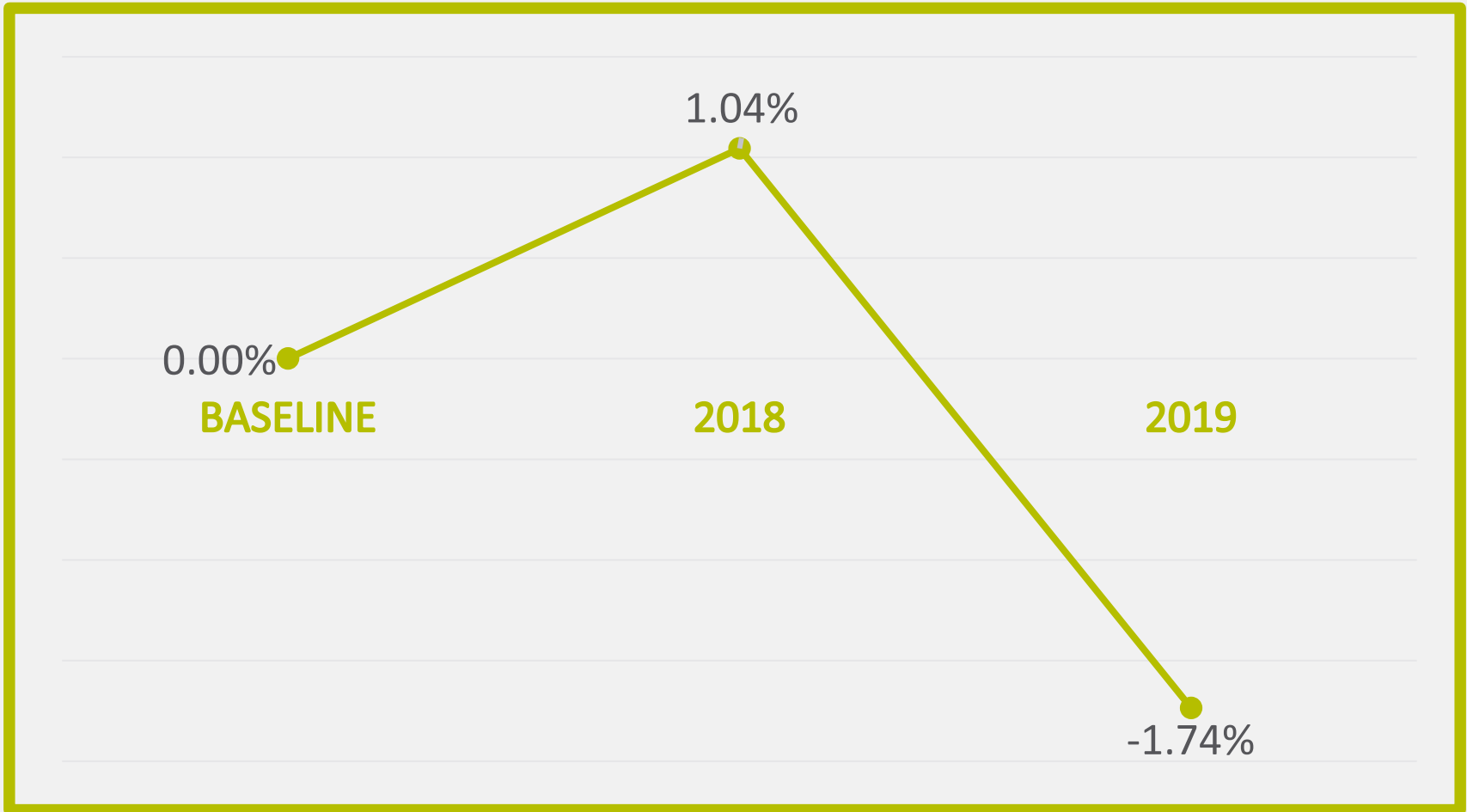
GHG Progress Breakdown – Credits

(in $MTCO_2e$)

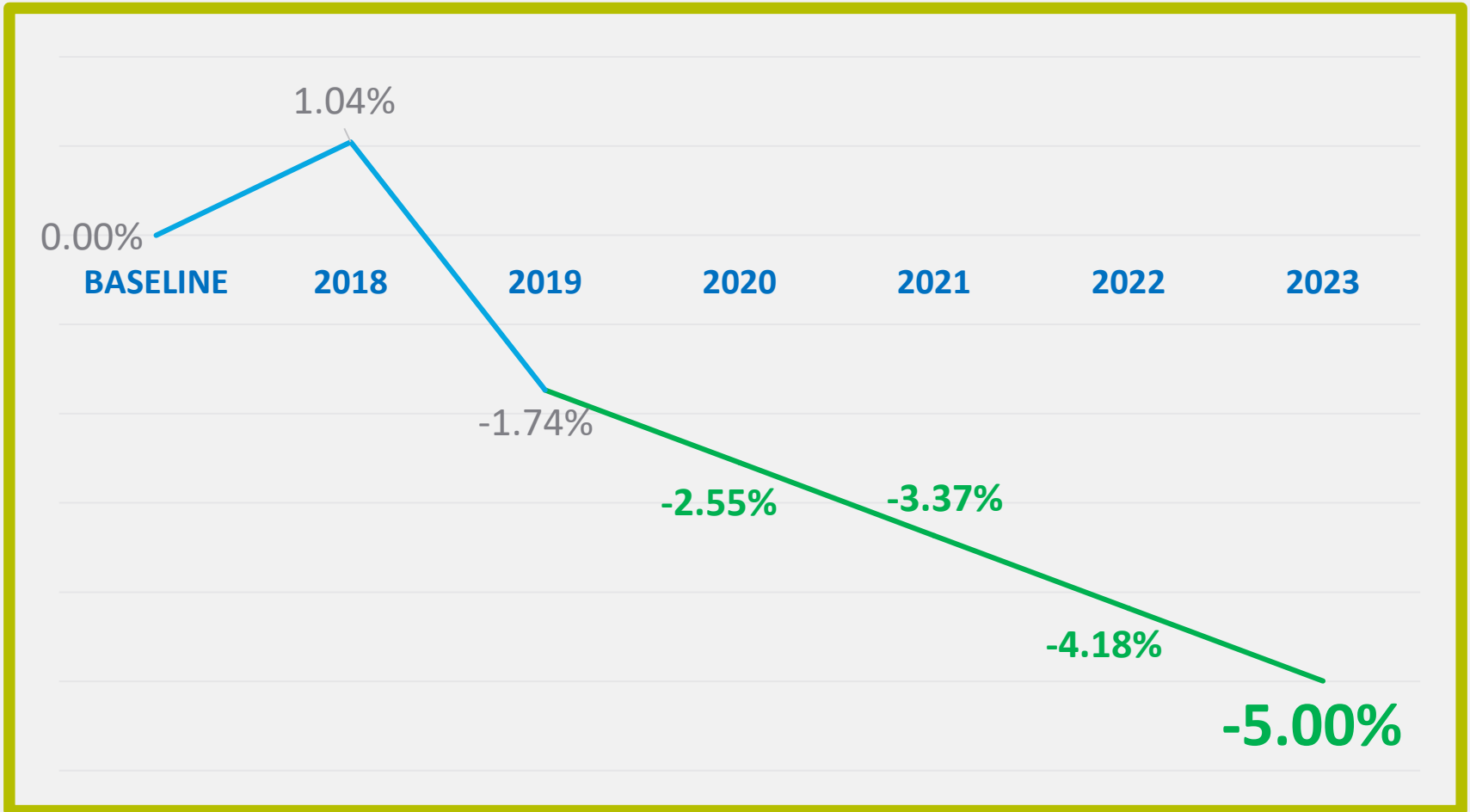


Emissions CREDIT Source	BASELINE	2018	2019
Recycling - City	-242	-265	-216
Recycling - Residential	-15108	-13098	-13744
Recycling - Commercial	-4601	-5035	-4110
Purchased RECs	-6296	-5439	-6712

GHG Emissions Progress to Goal



GHG Emissions Progress to Goal



GHG Emissions Reduction Goal

How Do We Get There?

All Hands on Deck

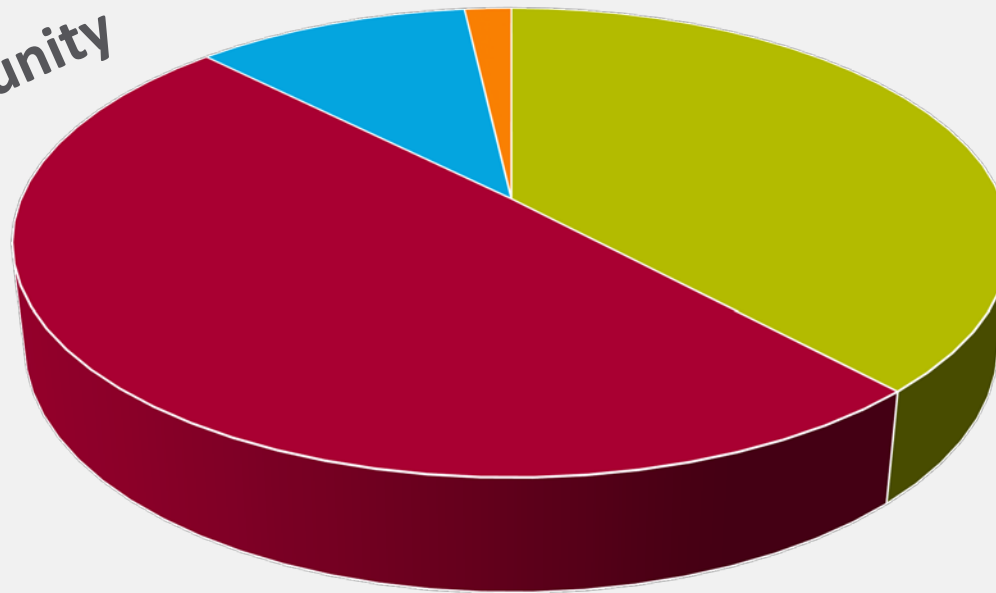


GHG Emissions Reduction Goal

How Do We Get There?

The Highland Park GHG Breakdown

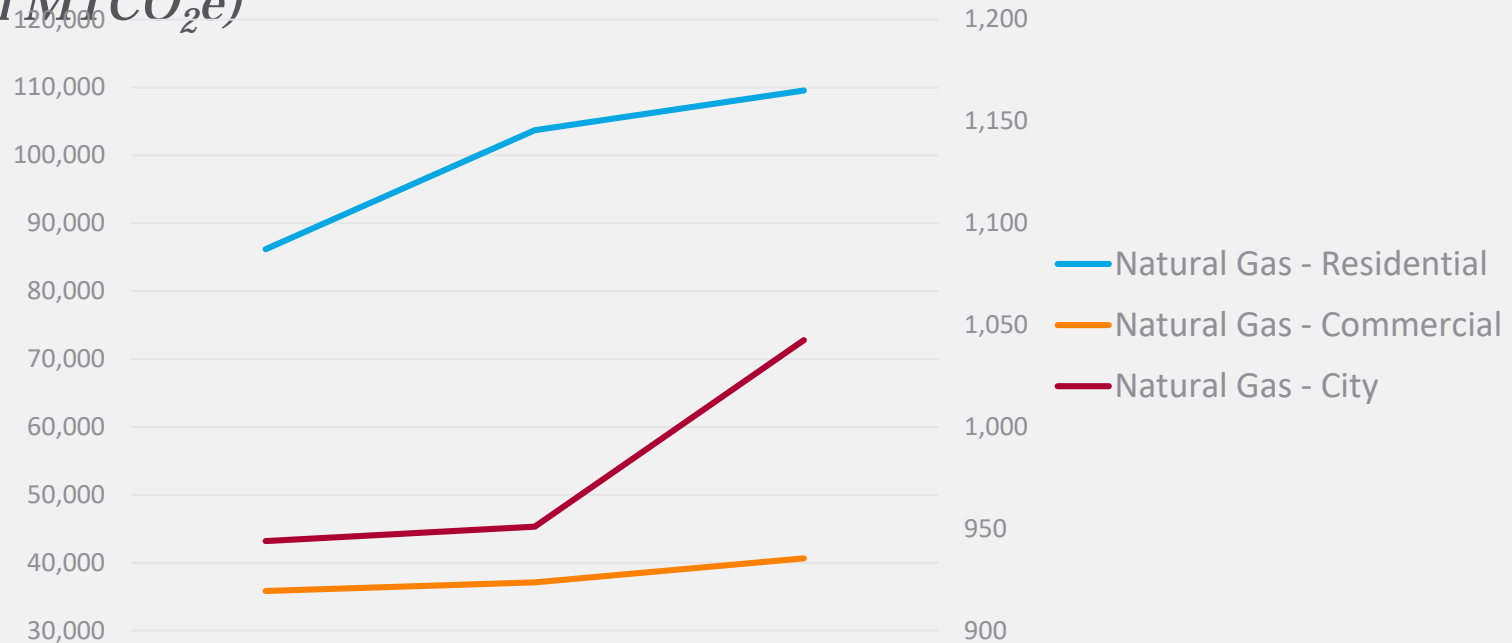
The Opportunity



■ Elec ■ Nat Gas ■ Trans ■ Landfill

GHG Progress Breakdown – Natural Gas

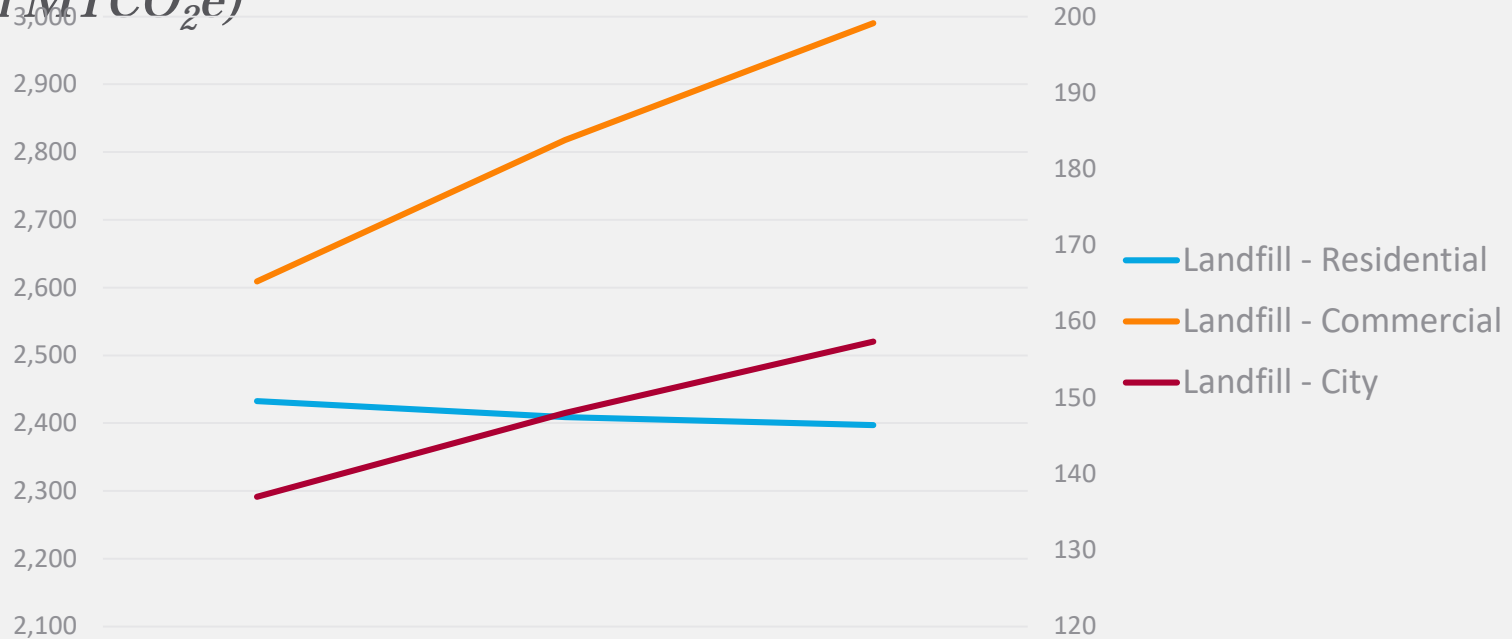
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(in $MTCO_2e$)



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GHG Emissions Reduction Goal

How Do We Get There?



City

Residential

Commercial

City

Residential

Commercial

City Fleet

On-Road

Rail

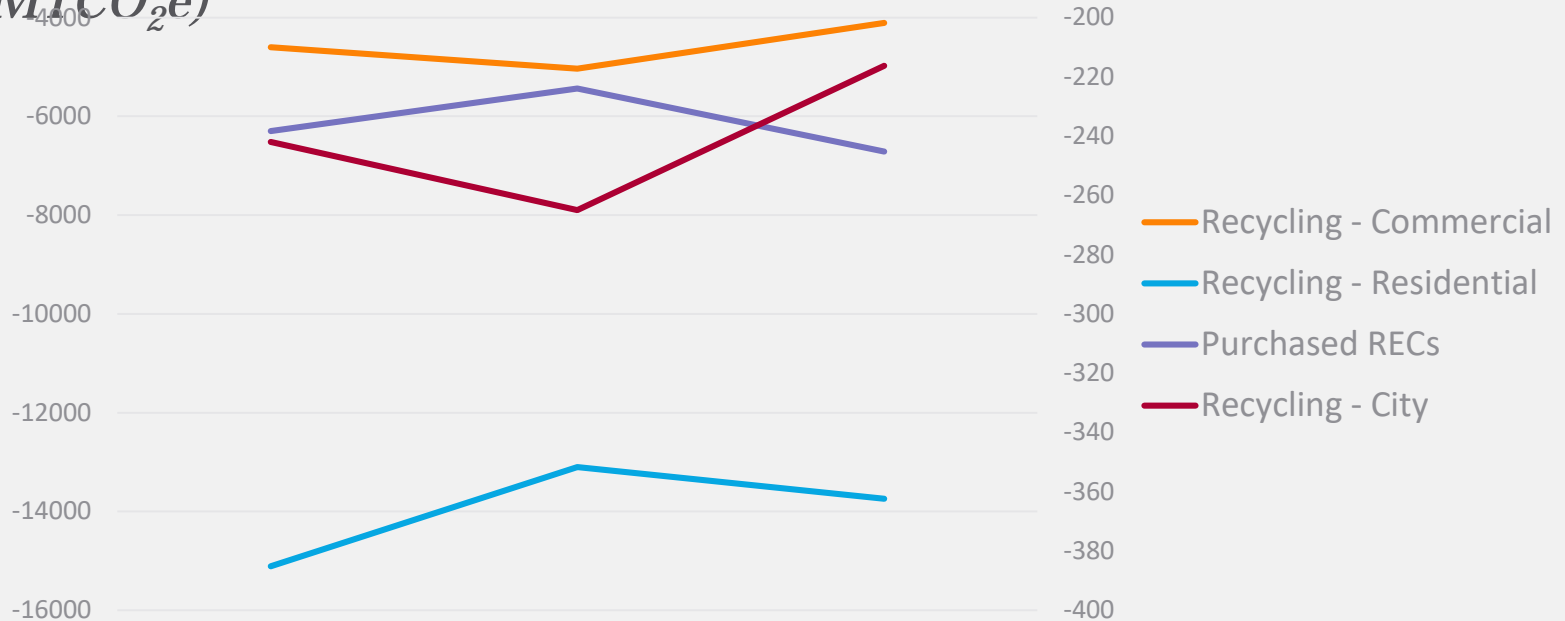
City

Residential

Commercial

GHG Progress Breakdown – Credits

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GHG Emissions Reduction Goal

How Do We Get There?



City

Residential

Commercial

Purchased
Electricity

Things to Remember...



Greenhouse Gas Emissions

 Highland Park

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