CCP Phase 1 Action Item Assessment

A Presentation to the Joint Sustainability Committee
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CCP Phase 1 Action Item Assessment

Introduction

Cavan Merski – Sr. IT Business Systems Analyst
Responsibilities:

- Community and Municipal GHG Emission inventories
- Create and execute GHG reduction strategies
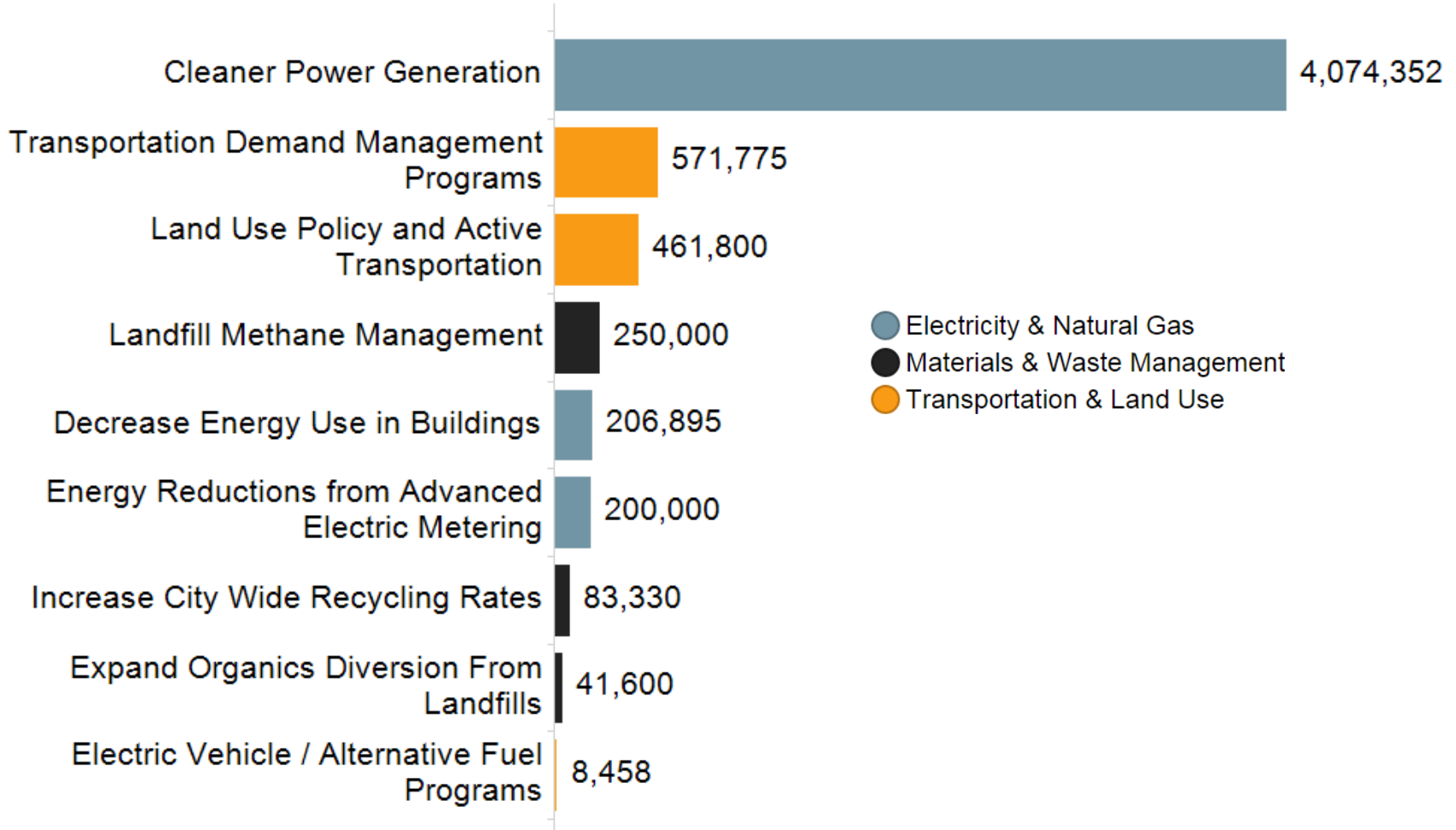- Measure, report, improve GHG performance

Purpose of This Exercise

- Quantify Phase 1 Actions from the CCP
- Measure and project progress to CCP targets
- Improve CCP implementation by informing stakeholders

Grouping Phase 1 Action Items

- Phase 1 Actions were grouped by sector and strategy then quantified
- Groups and sectors were aggregated and compared to highlight impacts

Sector	Phase 1 Action Groups	CCP Action Items
Electricity & Natural Gas	Cleaner Power Generation	RT-1, RT-2
	Decrease Energy Use in Buildings	BIE-1, BIE-2, BIE-4, BIE-10, BIE-11
	Energy Reductions from Advanced Electric Metering	BIE-3, BIE-7, BIE-8, BC-1, BC-2 and BC-4
Transportation & Land Use	Transportation Demand Management Programs	IS-1, IS-3, TDM-1, TDM-2, TDM-4, TDM-8, EPS-2
	Land Use Policy and Active Transportation	LU-1-5, TDM-3, PP-1
	Electric Vehicle / Alternative Fuel Programs	VFE-1
Materials and Waste Management	Landfill Methane Management	MM-1, MM-2
	Increase City Wide Recycling Rates	RE-1 - RE-5
	Expand Organics Diversion From Landfills	OD -1 - OD-3

Phase 1 Action Groups GHG Emission Reductions (Mt CO2e)

Action Group	Reduction
Cleaner Power Generation	4,074,352
Transportation Demand Management Programs	571,775
Land Use Policy and Active Transportation	461,800
Landfill Methane Management	250,000
Decrease Energy Use in Buildings	206,895
Energy Reductions from Advanced Electric Metering	200,000
Increase City Wide Recycling Rates	83,330
Expand Organics Diversion From Landfills	41,600
Electric Vehicle / Alternative Fuel Programs	8,458

Legend:
- Electricity & Natural Gas
- Materials & Waste Management
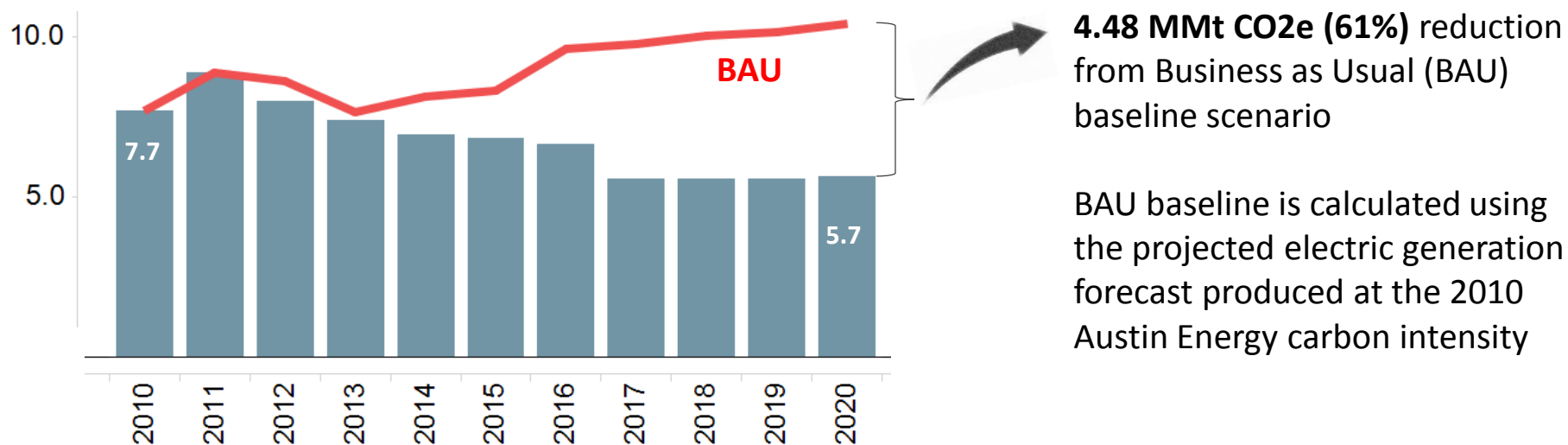- Transportation & Land Use

Projected GHG emission reductions are calculated against a 2020 Business as Usual (BAU) baseline where theoretically no CCP actions are taken

Electricity & Natural Gas

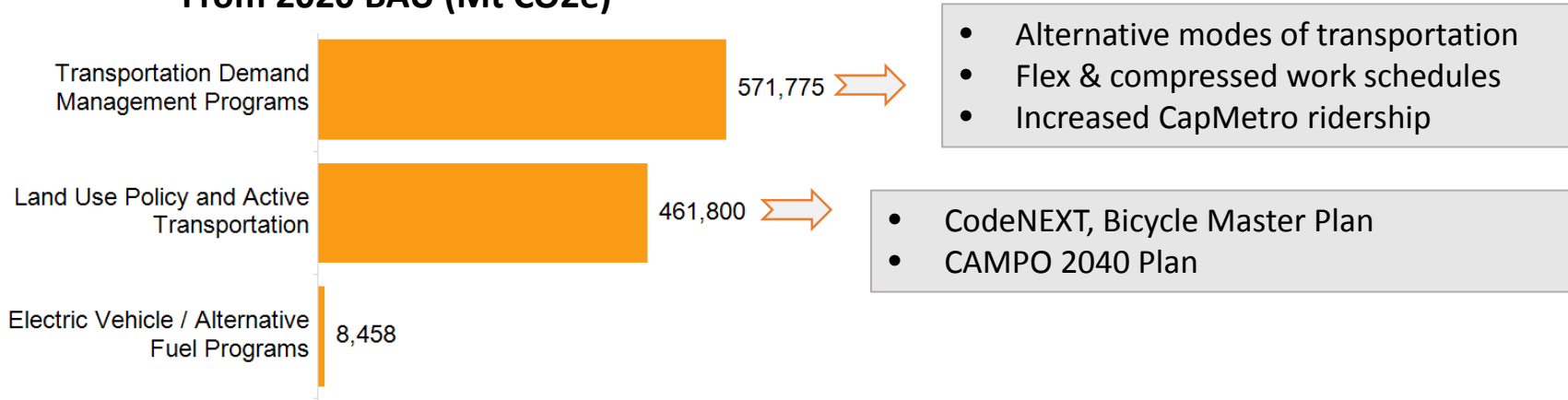## Phase 1 Action Groups GHG Reductions From 2020 BAU (Mt CO2e)

Category	Value
Cleaner Power Generation	4,074,352
Decrease Energy Use in Buildings	206,895
Energy Reductions from Advanced Electric Metering	200,000

- Additional solar and wind generation from PPA's + local solar
- Future market conditions

- PACE grants
- AE Customer Energy Solutions (CES)
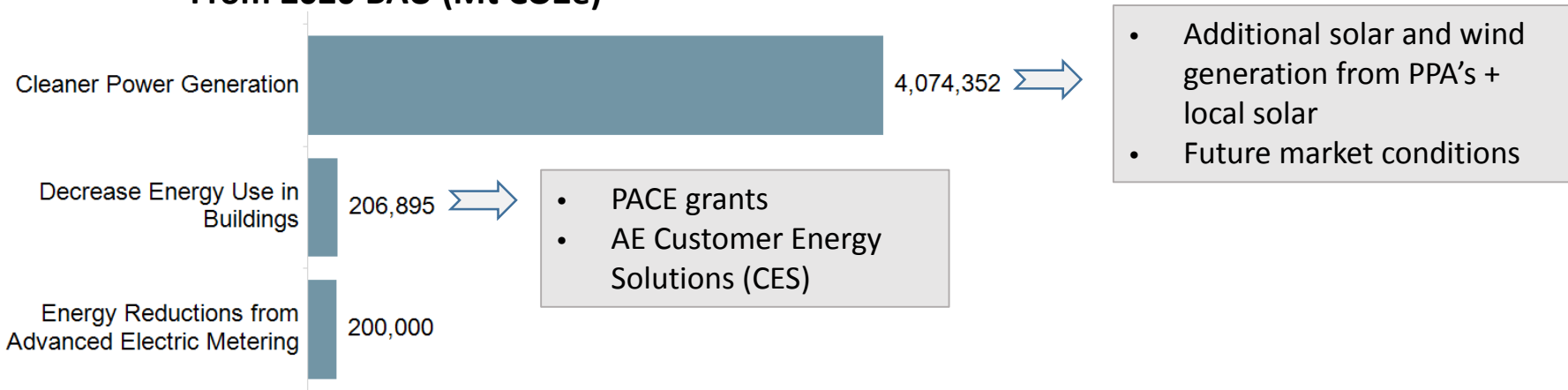
Electricity & Natural Gas GHG Emissions (MMt CO2e)

BAU

7.7

5.7

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

4.48 MMt CO2e (61%) reduction from Business as Usual (BAU) baseline scenario

BAU baseline is calculated using the projected electric generation forecast produced at the 2010 Austin Energy carbon intensity

Transportation & Land Use

Phase 1 Action Groups GHG Reductions From 2020 BAU (Mt CO2e)

Transportation Demand Management Programs	571,775
Land Use Policy and Active Transportation	461,800
Electric Vehicle / Alternative Fuel Programs	8,458

- Alternative modes of transportation
- Flex & compressed work schedules
- Increased CapMetro ridership

- CodeNEXT, Bicycle Master Plan
- CAMPO 2040 Plan
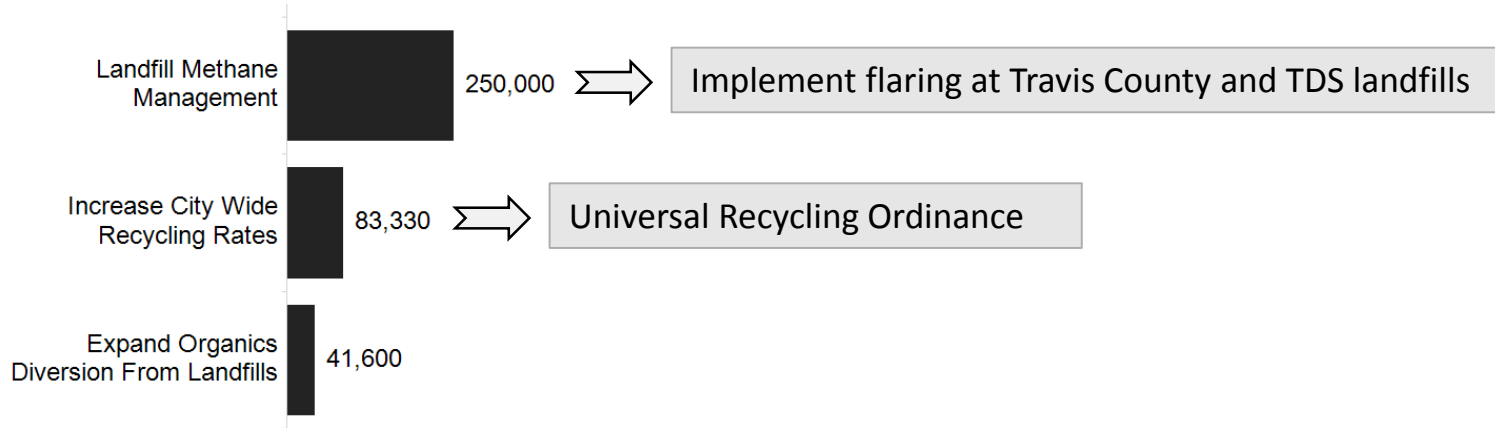
Transportation & Land Use GHG Emissions (MMt CO2e)

BAU

4.9 ... 4.2
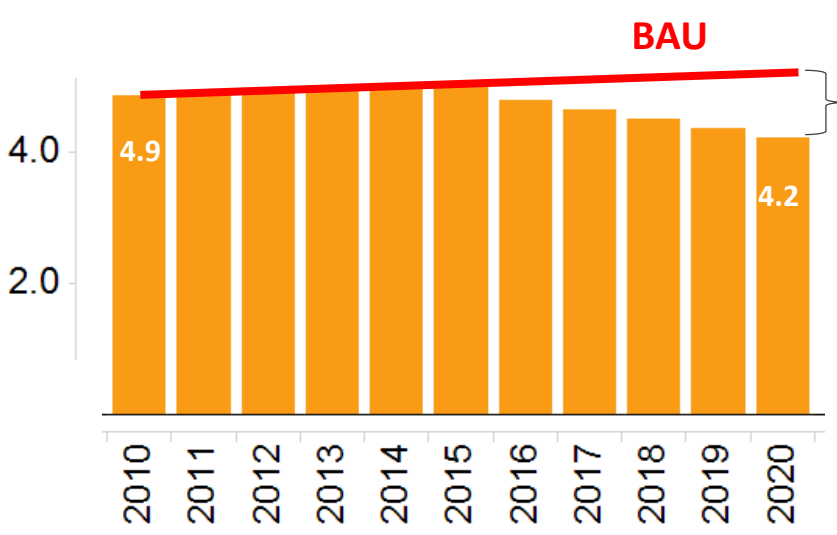
(years 2010 – 2020)

1.1 MMt CO2e (20%) reduction from Business as Usual (BAU) baseline scenario

BAU based on an extrapolation of previous inventories (2010 & 2013) with TTI's projections for population and VMT
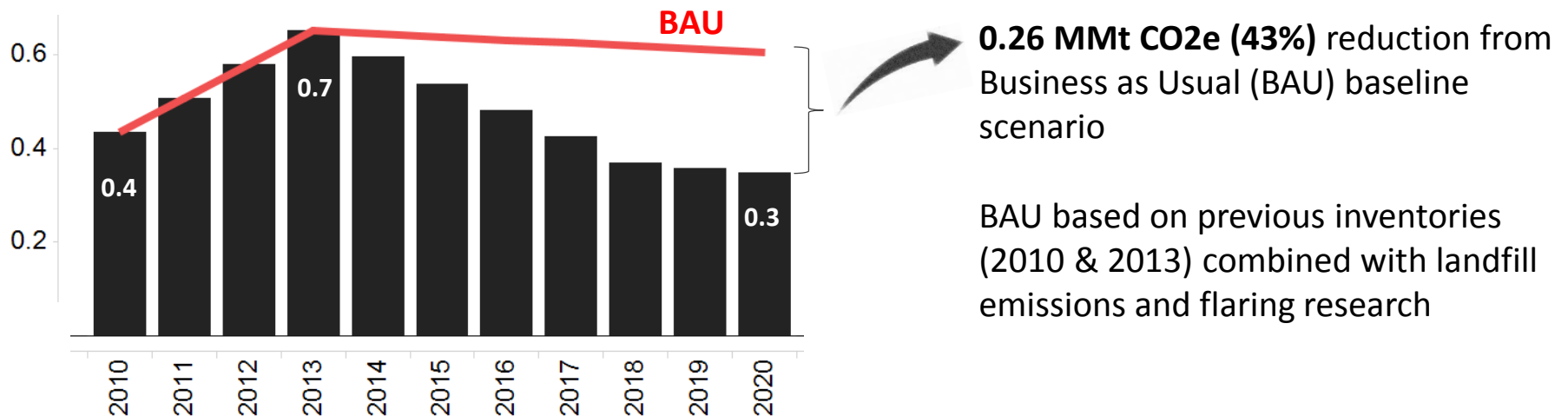
Projected Average Year over Year Changes 2010 - 2020		
Population Growth	VMT	BAU Emissions Increase
2.20%	2.02%	1.08%

Materials and Waste Management

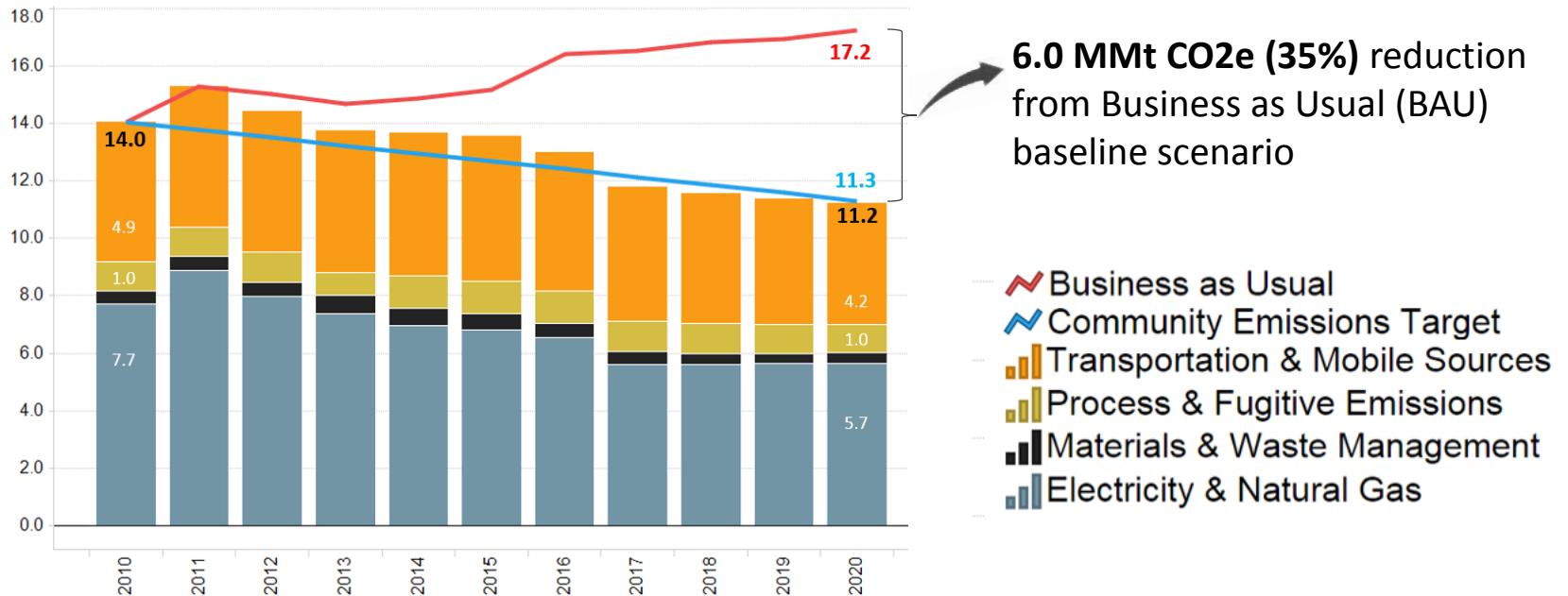## Phase 1 Action Groups GHG Reductions From 2020 BAU (Mt CO2e)

Landfill Methane Management — 250,000 ⇒ Implement flaring at Travis County and TDS landfills

Increase City Wide Recycling Rates — 83,330 ⇒ Universal Recycling Ordinance

Expand Organics Diversion From Landfills — 41,600

GHG Emissions from Materials and Waste Management (MMt CO2e)

BAU

0.4 ... 0.7 ... 0.3

2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

0.26 MMt CO2e (43%) reduction from Business as Usual (BAU) baseline scenario

BAU based on previous inventories (2010 & 2013) combined with landfill emissions and flaring research

Projected Community GHG Emissions

Projected Community GHG Inventory (MMt CO2e)

6.0 MMt CO2e (35%) reduction from Business as Usual (BAU) baseline scenario

Business as Usual
Community Emissions Target
Transportation & Mobile Sources
Process & Fugitive Emissions
Materials & Waste Management
Electricity & Natural Gas

Projected 2020 GHG emissions of 11.2 MMT CO2e
are **_below_** the 2020 target of 11.3 MMT CO2e

Conclusion

Takeaways

What's Next

- Our 2020 Community GHG Emission target of 11.2 MMt CO2e is achievable

Intermediate GHG emissions reductions from Phase 1 actions need to be measured to confirm theoretical calculations (2016 Community Inventory)

- GHG Emissions reductions are time consuming and difficult to measure and predict

Develop dynamic models to calculate emissions performance and manage Phase 1 Actions in these sectors