MA ENERGY EFFICIENCY ADVISORY COUNCIL

→ CONSULTANT TEAM

2023 YEAR END RESULTS

▶ July 17, 2024

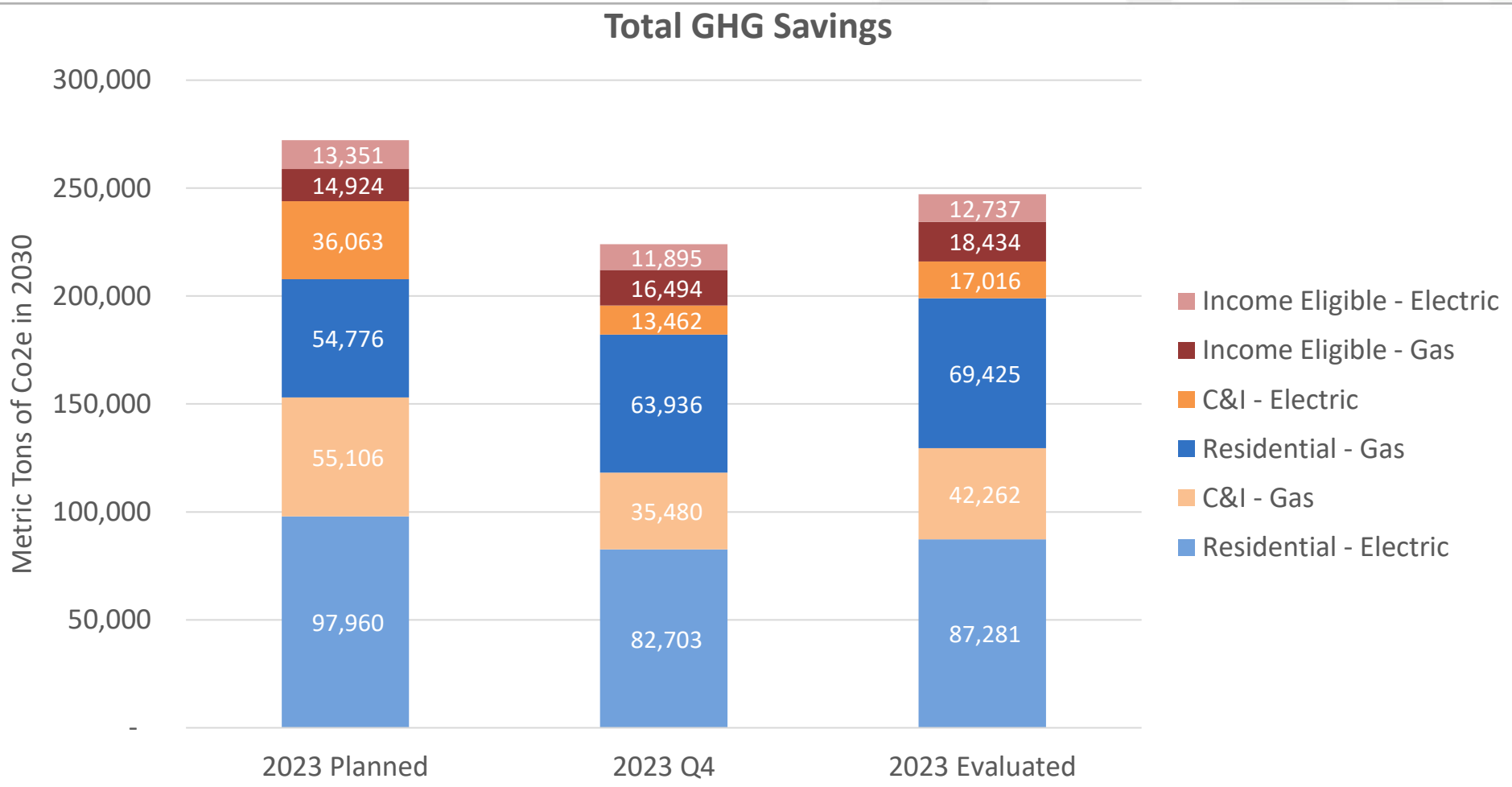
www.ma-eeac.org

INTRODUCTION

- **C-Team presented on 2023 results in Q4 presentation at March EEAC meeting**
- **Year-end data reflects revised inputs resulting from evaluation studies (EM&V) and PA data corrections**
- **Many changes between Q4 and the annual results driven by year end close out process**
- **BCR models provide measure level data for all offerings in all sectors**
- **Purpose of this presentation is to:**
  - Highlight variances from Q4 data
  - Discuss additional conclusions drawn from year-end data and reports
- **The Appendix includes additional information on Q1 Results**

NOTABLE UPDATES FROM Q4 2023 REPORT

TOTAL GHG SAVINGS



SIGNIFICANT GHG VARIANCES

- **Significant GHG 2023 Q4 and evaluated variations in:**
  - National Grid Electric Q4 and evaluated data for C&I New & Replacement Equipment
  - National Grid Gas Q4 and evaluated data for Residential Retail, Income Eligible Coordinated Delivery, C&I New Buildings & Major Renovations, and C&I New & Replacement Equipment
  - EGMA Q4 and evaluated data for C&I New & Replacement Equipment

OTHER MAJOR VARIANCES

- **CLC had large decreases and increases in multiple categories compared to Q4**

CLC Percent Change Over Q4 values

Sector	Annual Savings (MMBtu)	Lifetime Savings (MMBtu)	Avoided CO2 in 2030	Total Benefits	Total Costs
Residential	12%	13%	19%	16%	13%
IES	-82%	-63%	-20%	-194%	17%
C&I	19%	22%	30%	28%	18%
Total	**4%**	**6%**	**15%**	**-11%**	**15%**

- **Other notable variances are:**
  - National Grid Electric C&I GHG (44% +)
  - Unitil Electric C&I Savings (56% +)
  - Unitil Gas IES Benefits (39% +)

PLAN YEAR REPORT

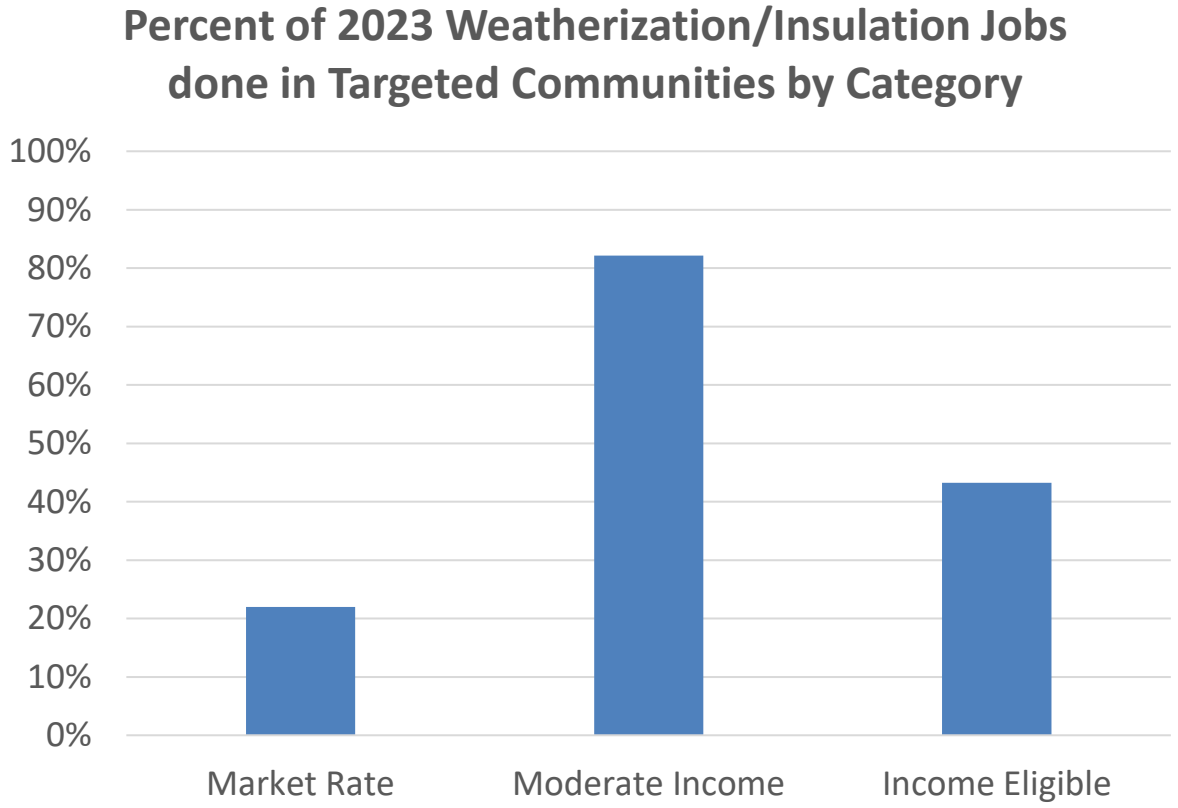
BENEFITS BY CATEGORY - % OF 2023 PLAN - UPDATED

	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Statewide Electric	Residential	114%	54%	54%	87%
	IES	125%	98%	44%	110%
	C&I	72%	99%	8%	62%
	Total	**92%**	**70%**	**36%**	**79%**
Statewide Gas	Residential	105%	69%	561%	92%
	IES	127%	157%	0 planned, $406k achieved	142%
	C&I	73%	52%	79%	72%
	Total	**98%**	**104%**	**101%**	**99%**

BENEFITS BY CATEGORY - % OF 2022-2024 TERM GOAL

	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Statewide Electric	Residential	74%	31%	26%	52%
	IES	82%	56%	20%	67%
	C&I	53%	73%	3%	43%
	Total	**63%**	**43%**	**16%**	**50%**
Statewide Gas	Residential	70%	44%	317%	60%
	IES	80%	96%	0 planned, $533k achieved	88%
	C&I	48%	45%	34%	45%
	Total	**64%**	**65%**	**47%**	**63%**

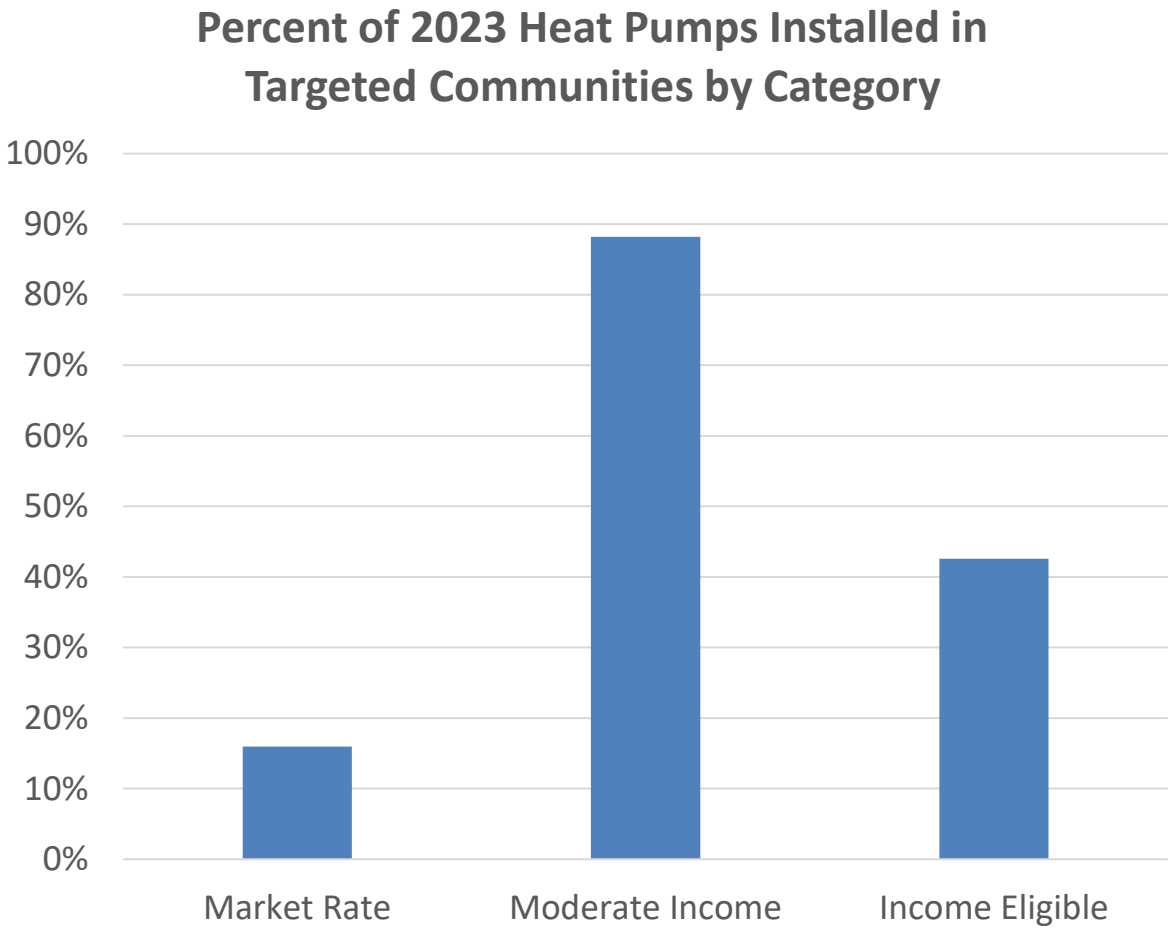
RESIDENTIAL ENVELOPE SAVINGS



Number of 2023 Weatherization and Insulation Jobs		
Category	Targeted Community	Total
Market Rate (including renters)	10,444	47,508
Moderate Income	414	504
Income Eligible	5,129	11,865

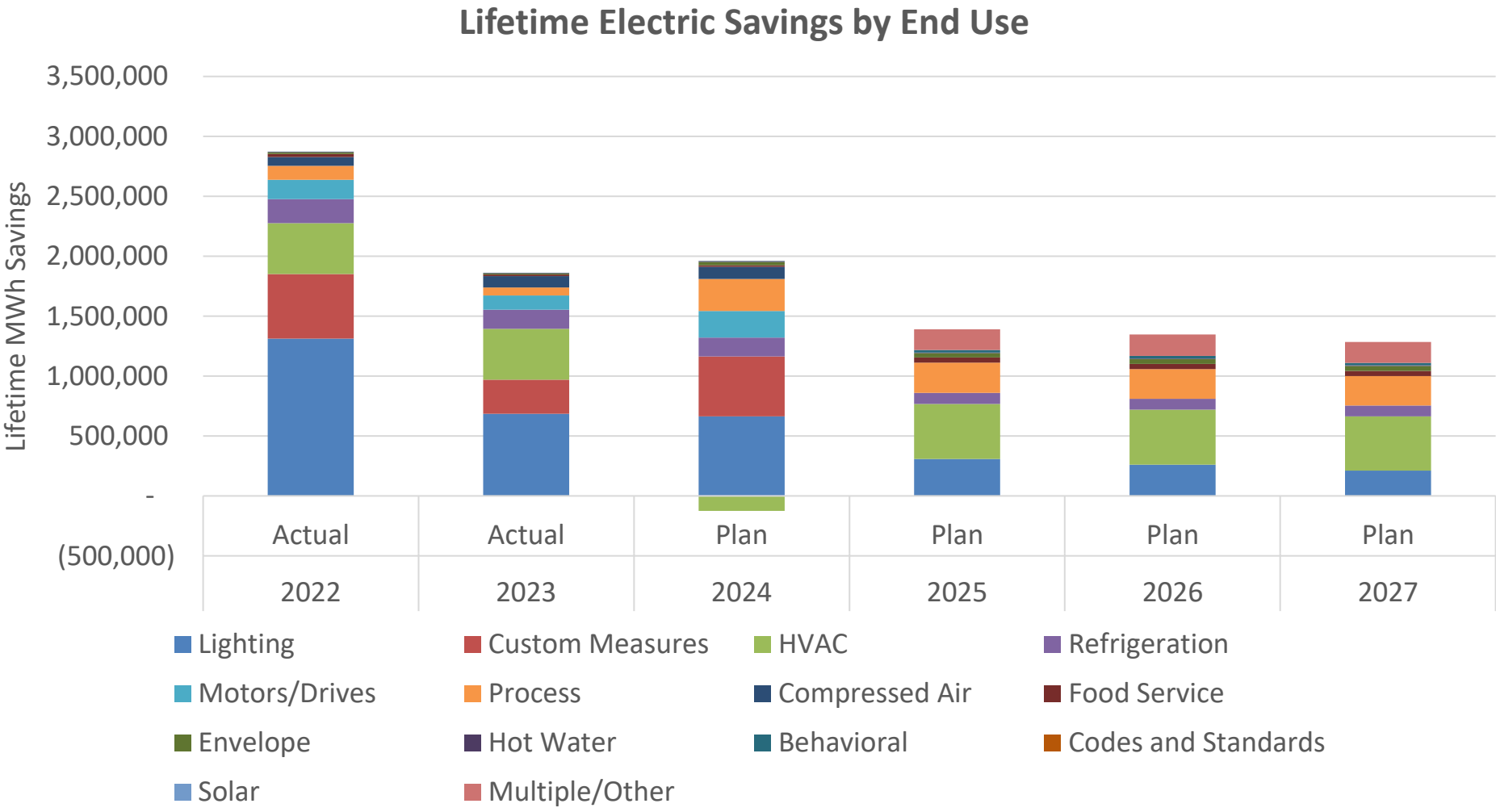
42% of MA population resides in a DPU designated Hard To Reach community.

HEAT PUMP INSTALLATION

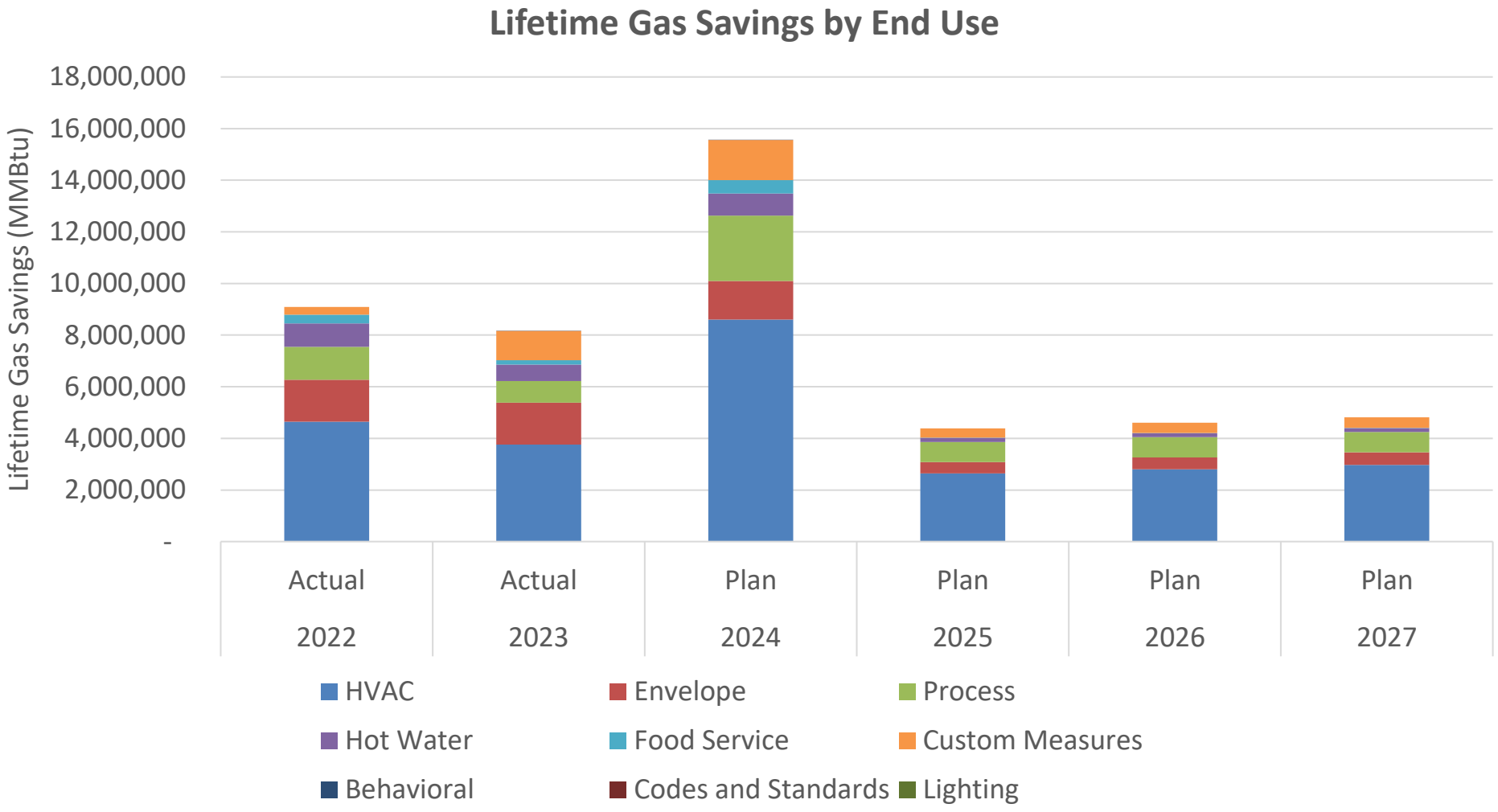


Tons of Heat Pumps Installed		
Category	Targeted Community	Total
Market Rate (including renters)	10,468	65,604
Moderate Income	202	229
Income Eligible	2,002	4,704

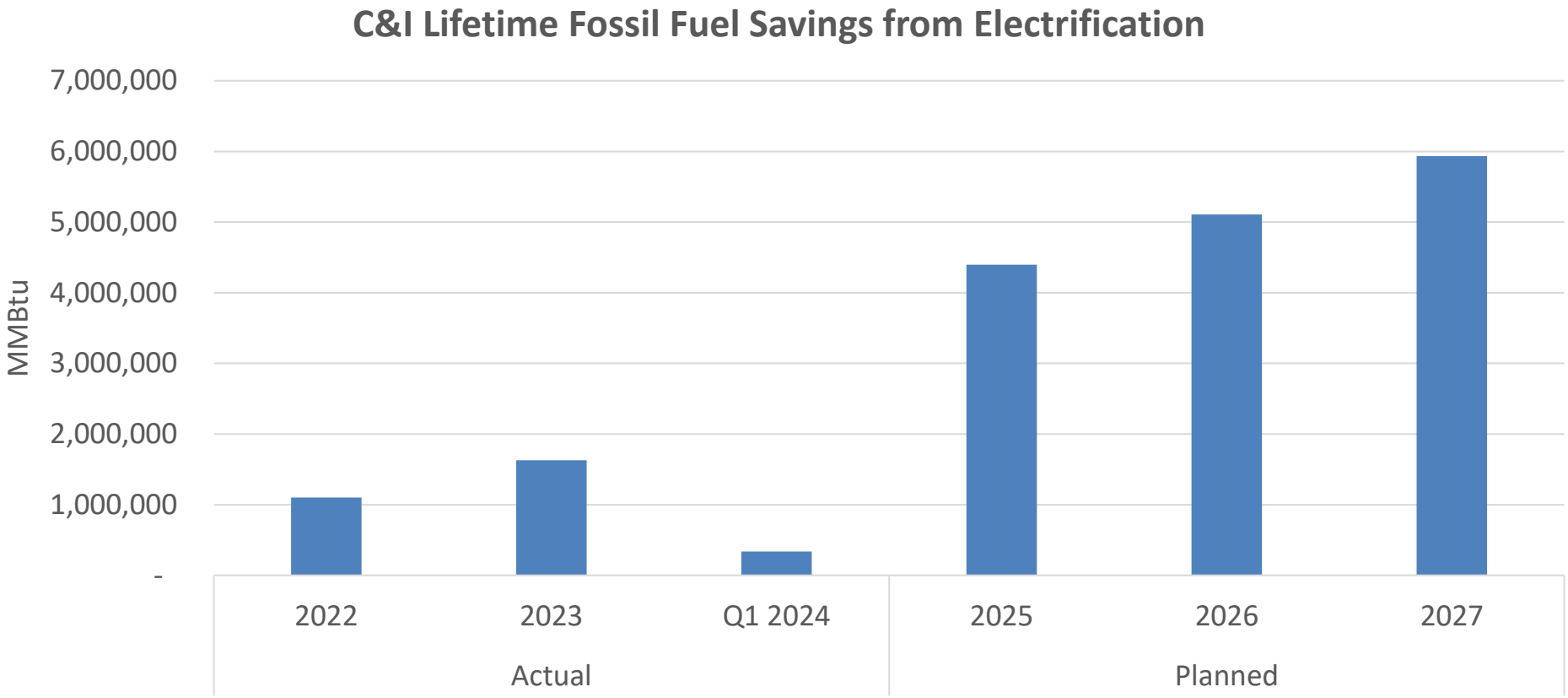
C&I ELECTRIC – BY MEASURE TYPES



C&I GAS – BY MEASURE TYPES



C&I ELECTRIFICATION



THANK YOU

Questions?

APPENDIX

BENEFITS BY CATEGORY - % OF 2023 PLAN – ELECTRIC PAS

	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Eversource	Residential	93%	88%	84%	90%
	IES	69%	130%	27%	84%
	C&I	75%	104%	15%	72%
	Total	**81%**	**104%**	**63%**	**81%**
National Grid	Residential	147%	54%	45%	85%
	IES	235%	84%	68%	136%
	C&I	73%	98%	8%	51%
	Total	**115%**	**66%**	**28%**	**76%**
Unitil	Residential	187%	143%	84%	146%
	IES	157%	80%	19%	108%
	C&I	59%	323%	32%	73%
	Total	**98%**	**147%**	**69%**	**106%**

BENEFITS BY CATEGORY - % OF 2023 PLAN – GAS PAS

	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Eversource	Residential	76%	71%	12653%	77%
	IES	140%	126%	0 planned, 106k achieved	130%
	C&I	46%	61%	111%	58%
	Total	**72%**	**96%**	**135%**	**84%**
National Grid	Residential	125%	58%	395%	97%
	IES	129%	176%	0 planned, 230k achieved	146%
	C&I	66%	52%	62%	64%
	Total	**105%**	**95%**	**79%**	**99%**

BENEFITS BY CATEGORY - % OF 2023 PLAN – GAS PAS – CONT.

	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Unitil	Residential	61%	140%	625%	100%
	IES	112%	49%	0%	78%
	C&I	47%	8%	0 planned, 601k achieved	72%
	Total	**68%**	**75%**	**13785%**	**83%**
Liberty	Residential	127%	134%	790%	134%
	IES	161%	202%	0%	200%
	C&I	90%	24%	0 planned, 394k achieved	65%
	Total	**110%**	**144%**	**4242%**	**139%**
Berkshire	Residential	102%	98%	2345%	104%
	Income Eligible	19%	121%	0%	49%
	Commercial & Industrial	89%	47%	0 planned, 769k achieved	98%
	Total	**66%**	**96%**	**12315%**	**83%**

BENEFITS BY CATEGORY - % OF 2022-2024 TERM GOAL– ELECTRIC PAS

	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Eversource	Residential	60%	48%	36%	51%
	IES	50%	78%	11%	54%
	C&I	56%	95%	3%	50%
	Total	**57%**	**67%**	**22%**	**51%**
National Grid	Residential	97%	31%	24%	52%
	IES	149%	46%	32%	80%
	C&I	54%	57%	3%	36%
	Total	**78%**	**38%**	**14%**	**48%**
Unitil	Residential	121%	91%	50%	93%
	IES	64%	53%	6%	55%
	C&I	24%	217%	30%	36%
	Total	**50%**	**96%**	**43%**	**60%**

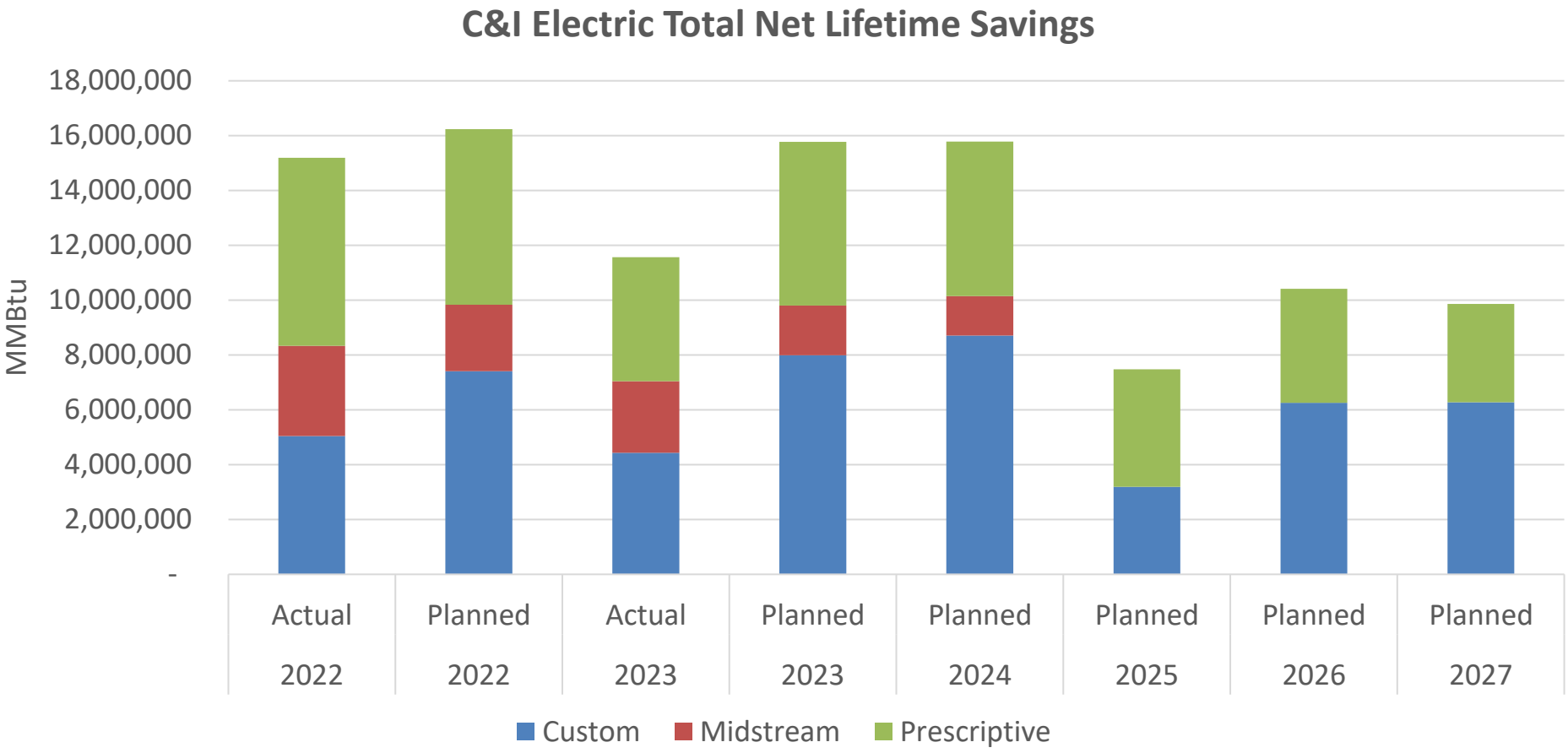
BENEFITS BY CATEGORY - % OF 2022-2024 TERM GOAL– GAS PAS

	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Eversource	Residential	51%	47%	5561%	50%
	IES	82%	77%	0 planned, 106k achieved	78%
	C&I	44%	58%	40%	45%
	Total	**52%**	**62%**	**51%**	**55%**
National Grid	Residential	84%	36%	273%	64%
	IES	88%	106%	0 planned, 357k achieved	94%
	C&I	43%	37%	29%	40%
	Total	**70%**	**58%**	**42%**	**64%**

BENEFITS BY CATEGORY - % OF 2022-2024 TERM GOAL– GAS PAS – CONT.

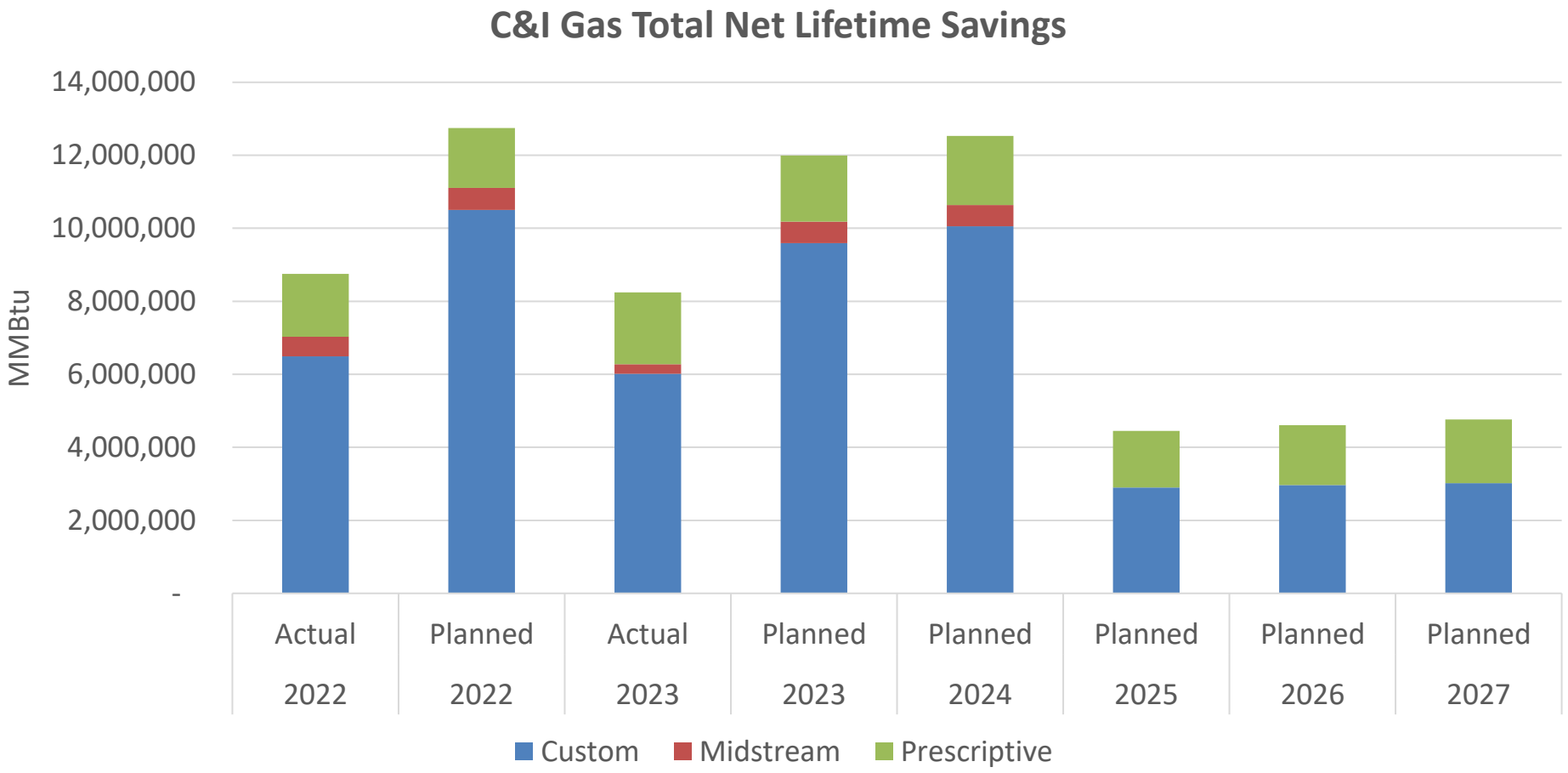
	Sector	Base Benefits	Equity Benefits	Electrification Benefits	Total Benefits
Unitil	Residential	48%	92%	422%	70%
	IES	46%	45%	0%	45%
	C&I	23%	78%	0 planned, 618k achieved	45%
	Total	**36%**	**67%**	**5970%**	**53%**
Liberty	Residential	81%	76%	353%	78%
	IES	113%	87%	0%	89%
	C&I	49%	21%	0 planned, 447k achieved	38%
	Total	**64%**	**58%**	**860%**	**62%**
Berkshire	Residential	13%	145%	0%	52%
	Income Eligible	54%	40%	0 planned, 957k achieved	58%
	Commercial & Industrial	41%	81%	4995%	57%
	Total	**64%**	**58%**	**860%**	**62%**

C&I ELECTRIC TOTAL NET LIFETIME SAVINGS



Midstream measures were not included in the 2025-2027 planned data

C&I GAS TOTAL NET LIFETIME SAVINGS

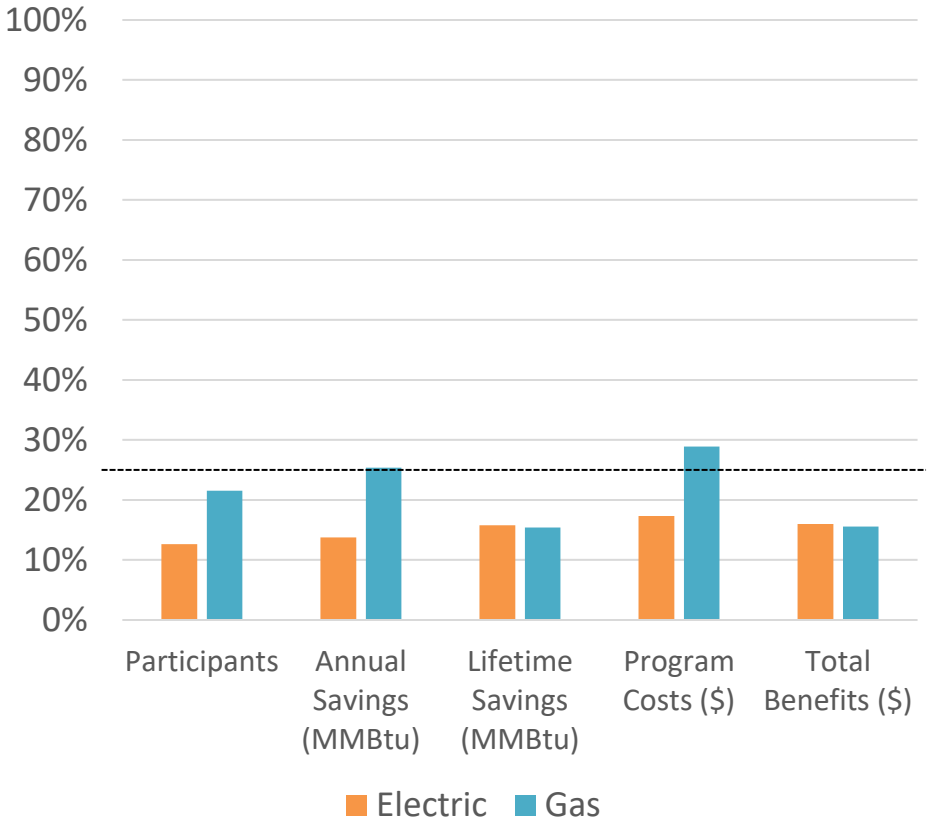


Midstream measures were not included in the 2025-2027 planned data

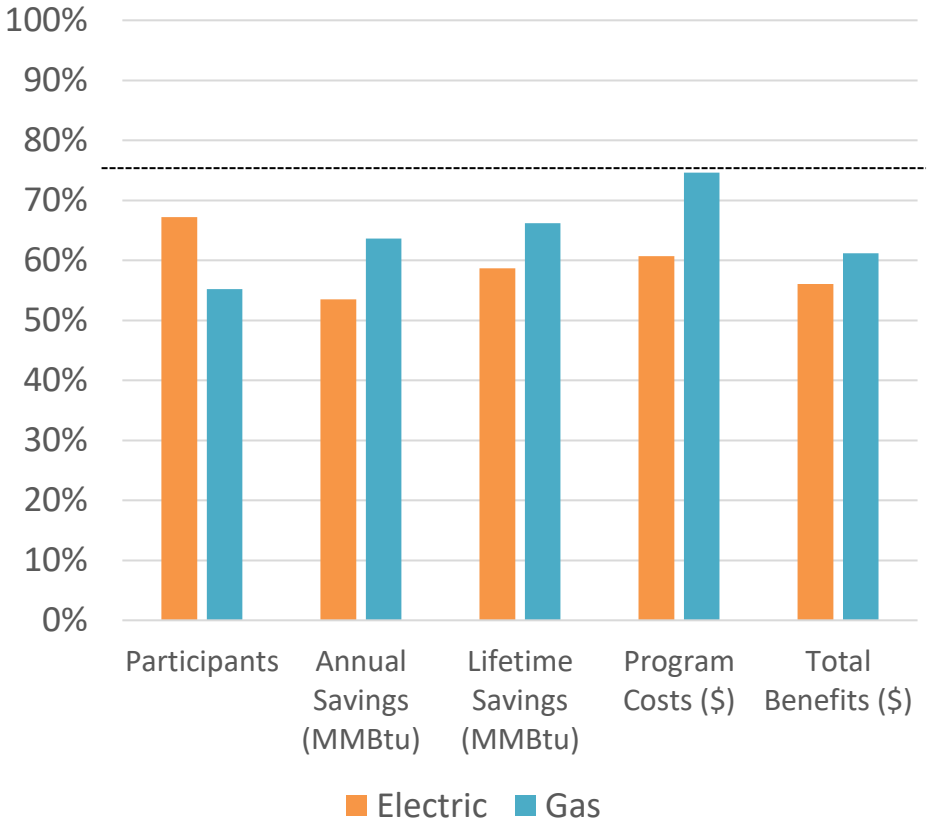
2024 Q1 RESULTS

RESIDENTIAL RESULTS OVERVIEW

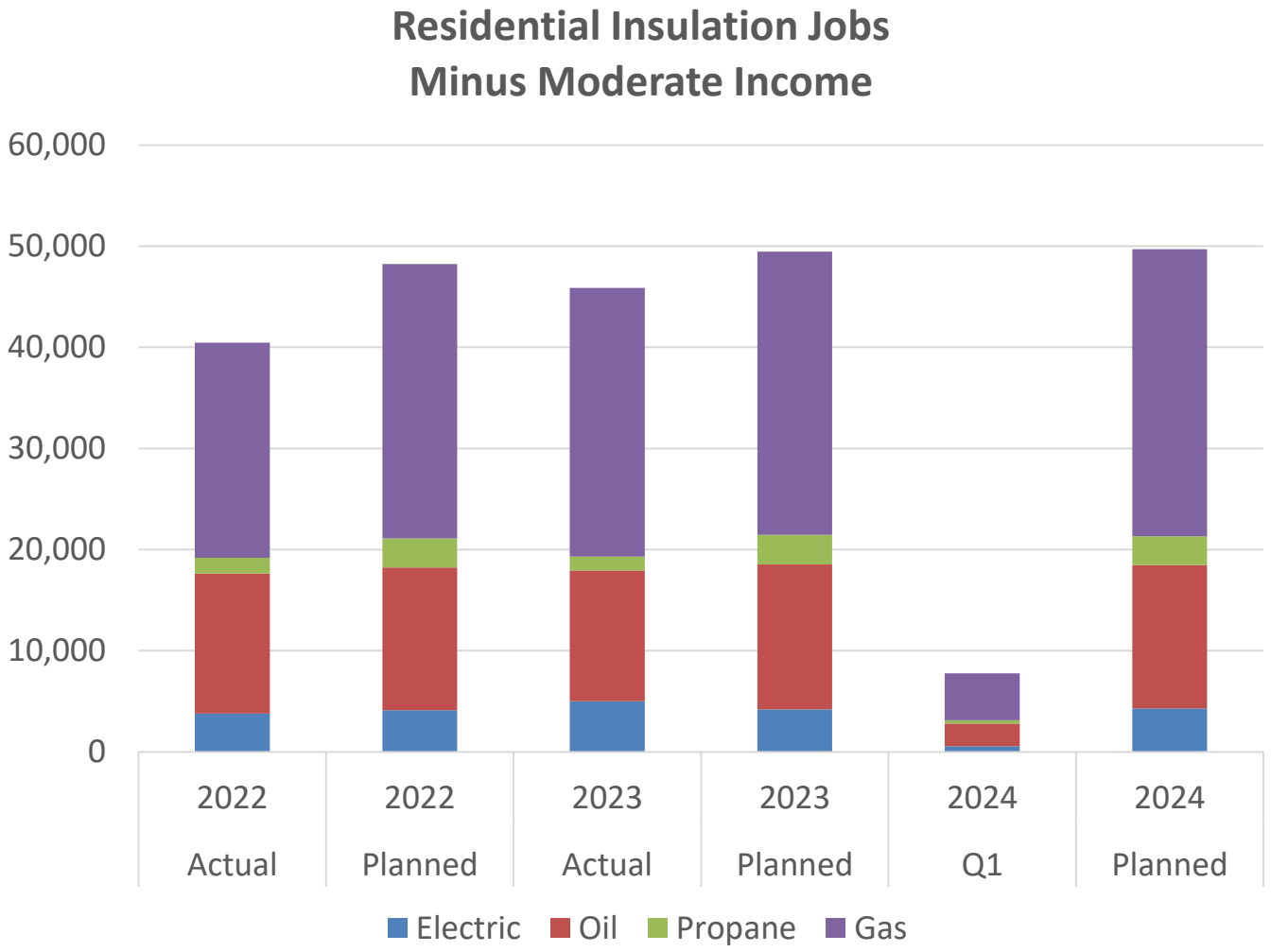
Residential Achievements as a Percentage of the 2024 Plan Values 25% of the Year Complete



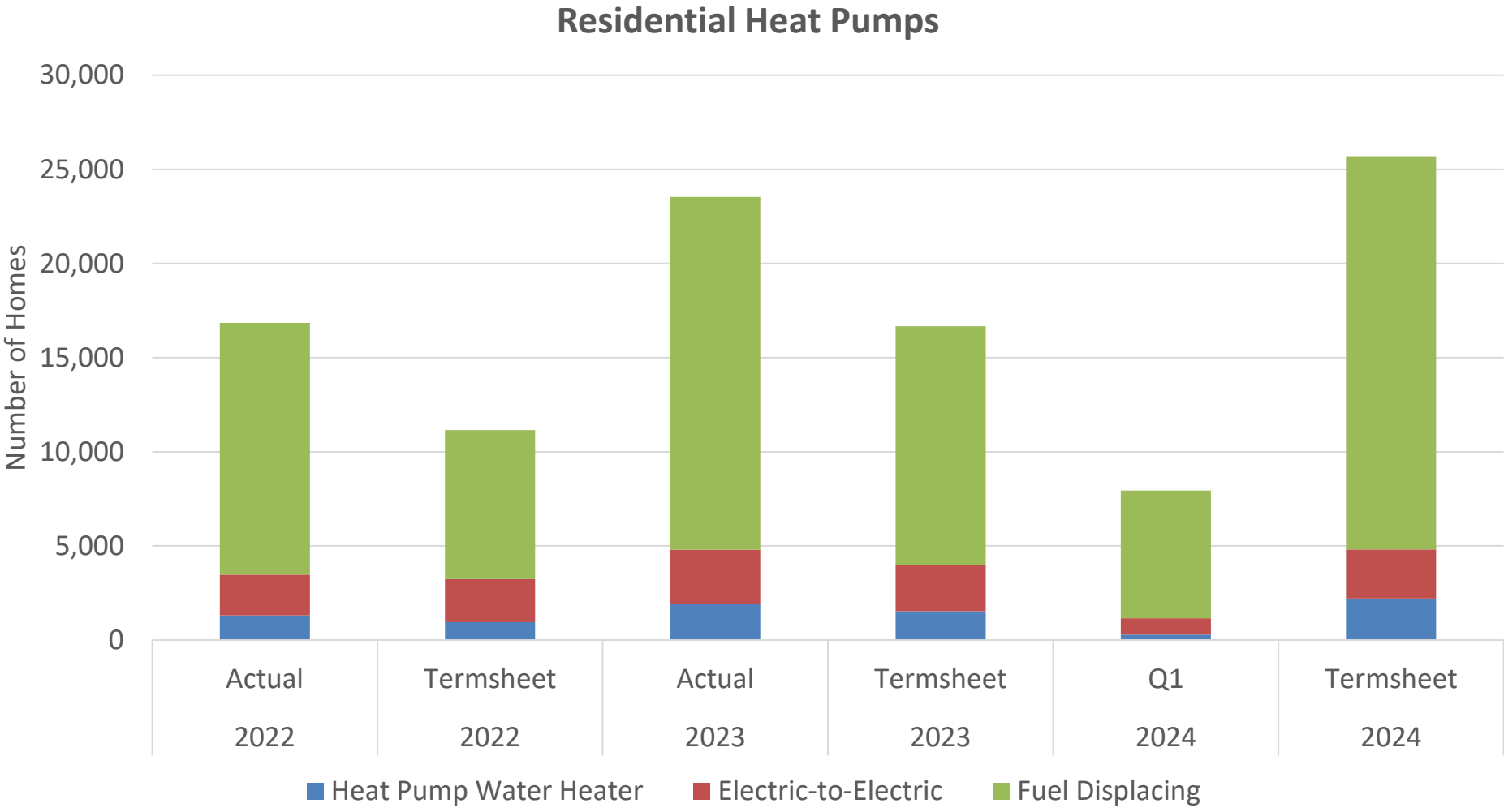
Residential Achievements as a Percentage of 2022-2024 Plan Values 75% of the Plan Complete



RESIDENTIAL INSULATION



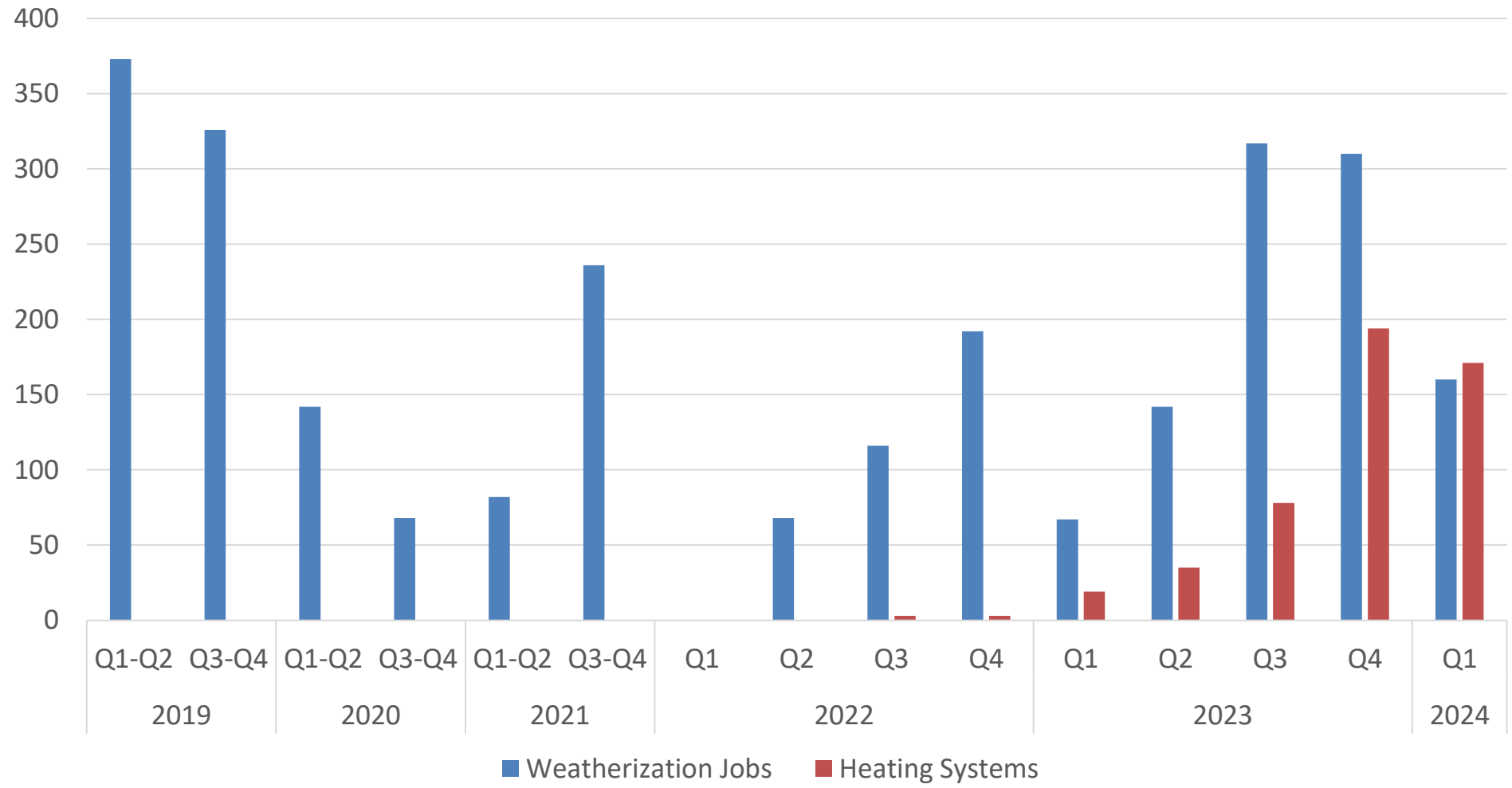
RESIDENTIAL HEAT PUMPS



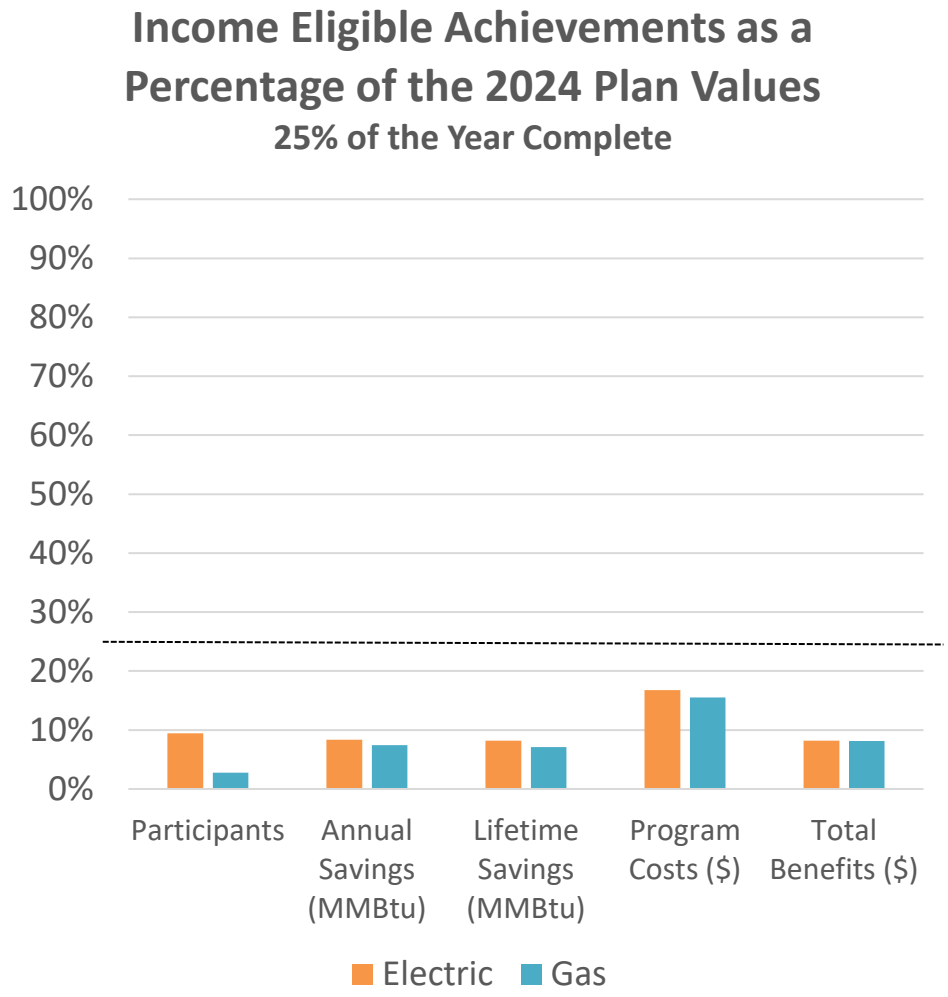
NEW CONSTRUCTION BY HEATING FUEL

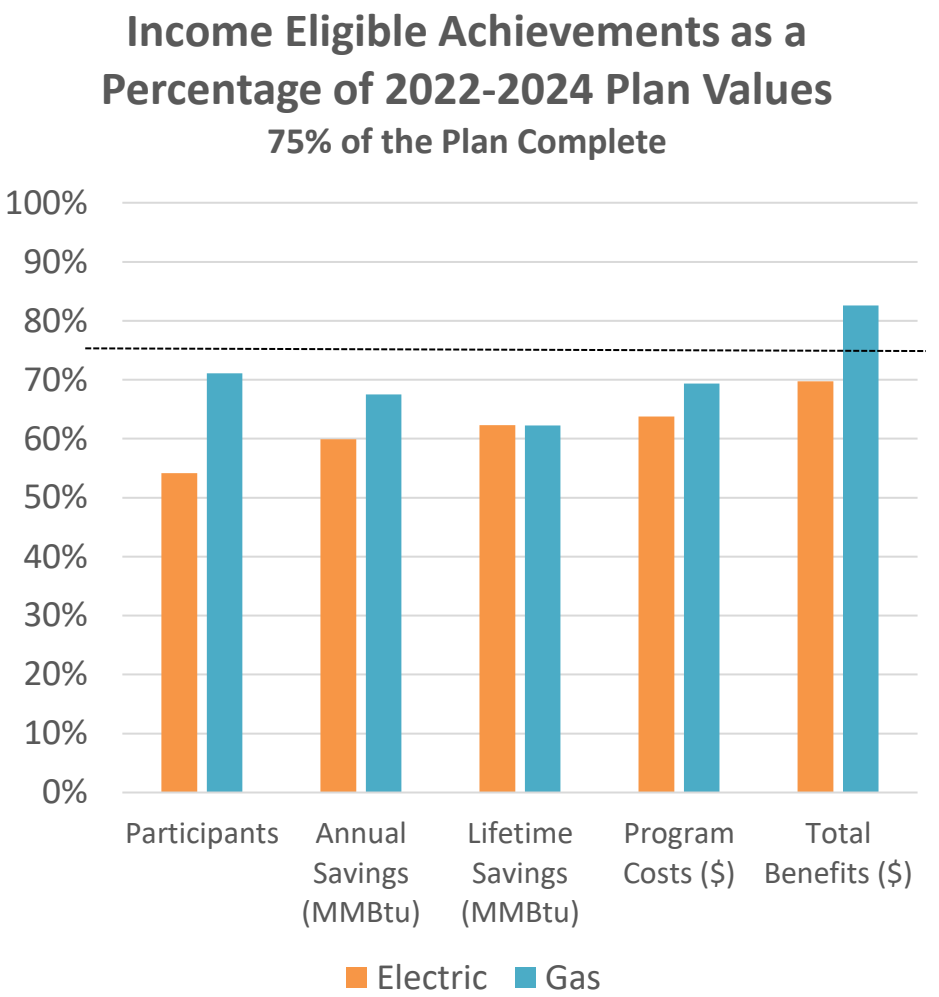
Fuel	2022 Units	2023 Units	Q1 2024 Units
Electric	1,754	4,077	1,326
Gas	5,258	7,679	563
Oil	6	-	-
Propane	1,384	1,052	191

MODERATE INCOME



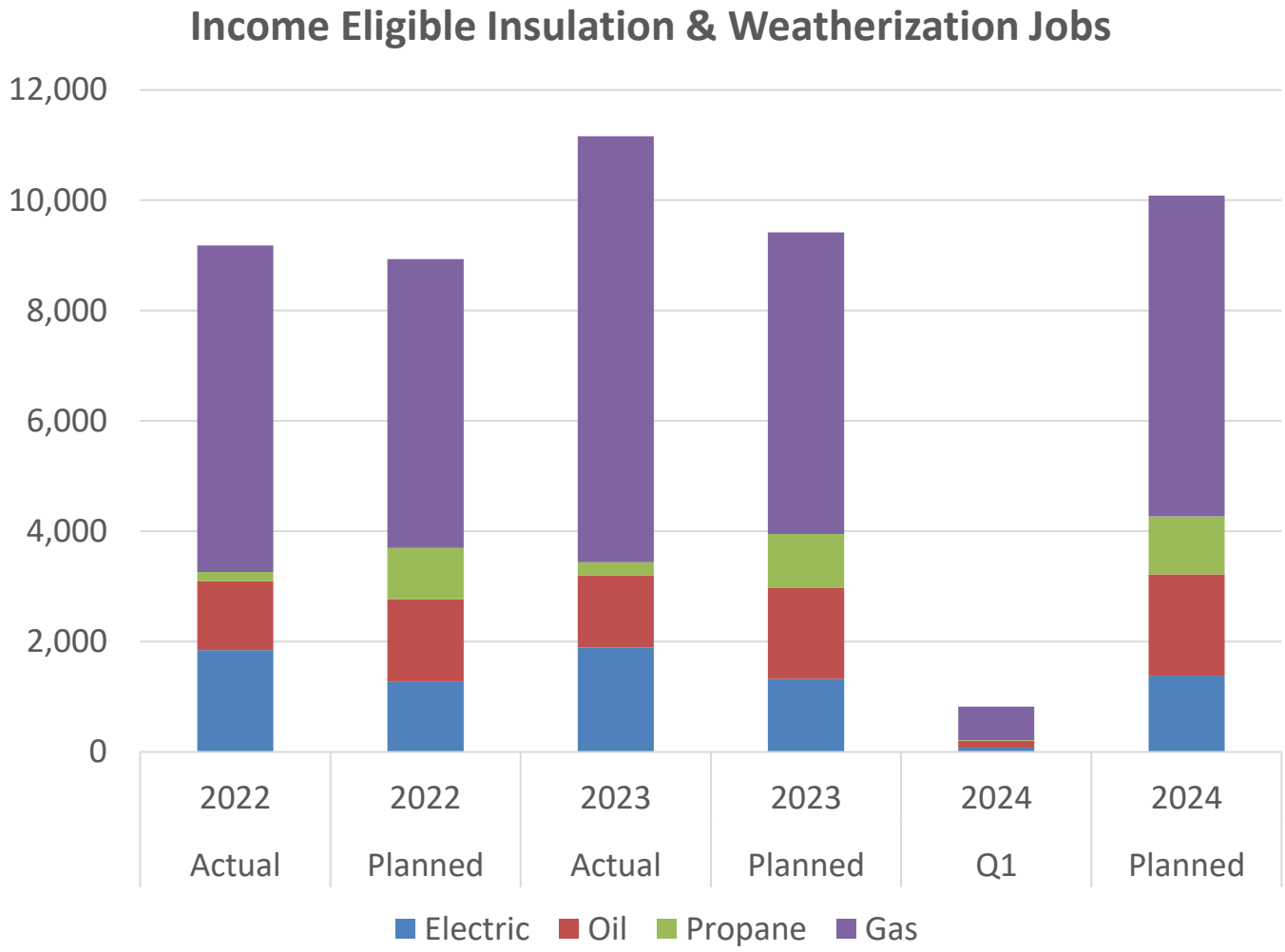
INCOME ELIGIBLE RESULTS OVERVIEW



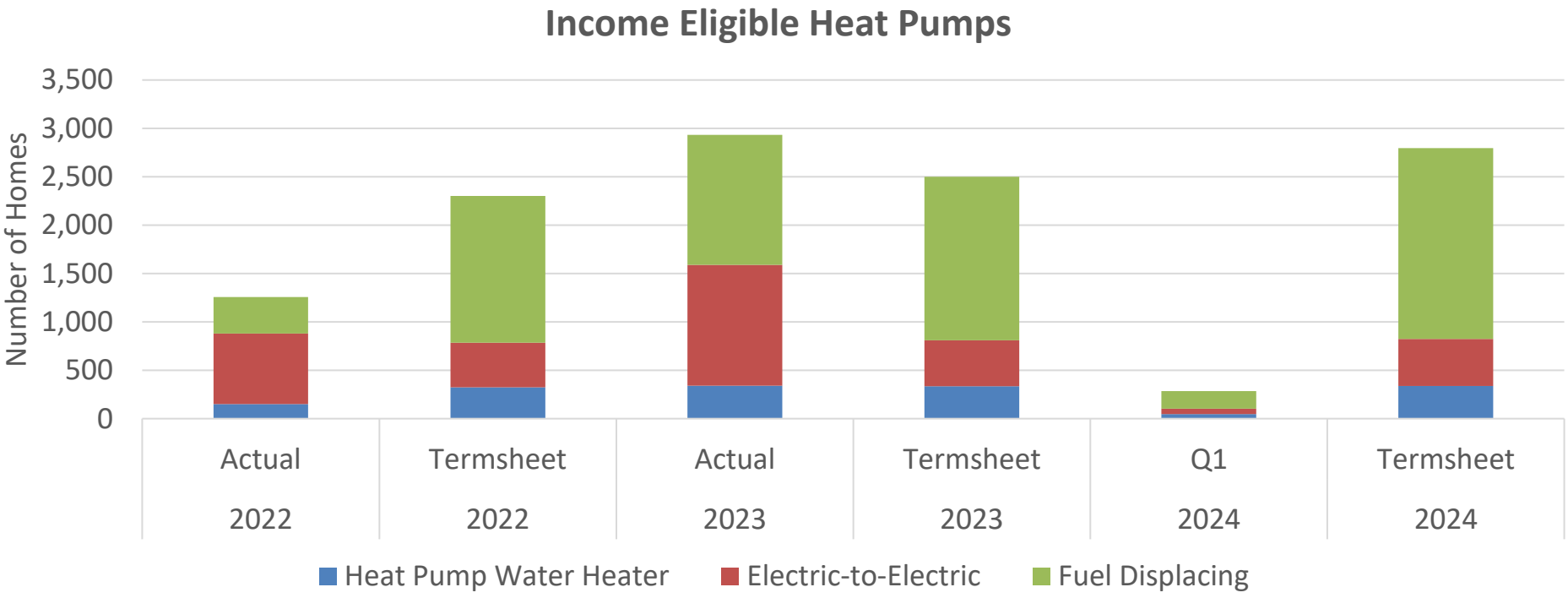


*Participants exclude demand management

INCOME ELIGIBLE WEATHERIZATION



INCOME ELIGIBLE HEAT PUMPS

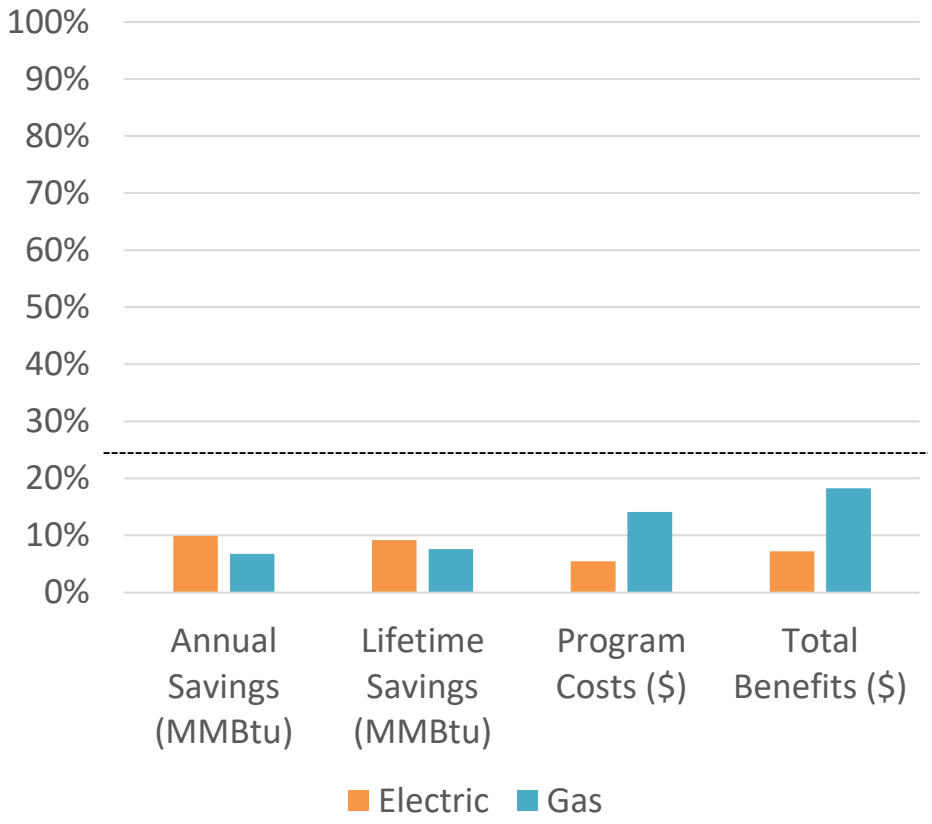


- **3,121 additional heat pumps are needed to meet 2022-2024 term goal**
  - 462 Heat Pump Water Heaters
  - 3,277 Fuel Displacing Heat Pumps
  - Overachievement of 618 Electric-to-Electric Heat Pumps

C&I RESULTS OVERVIEW

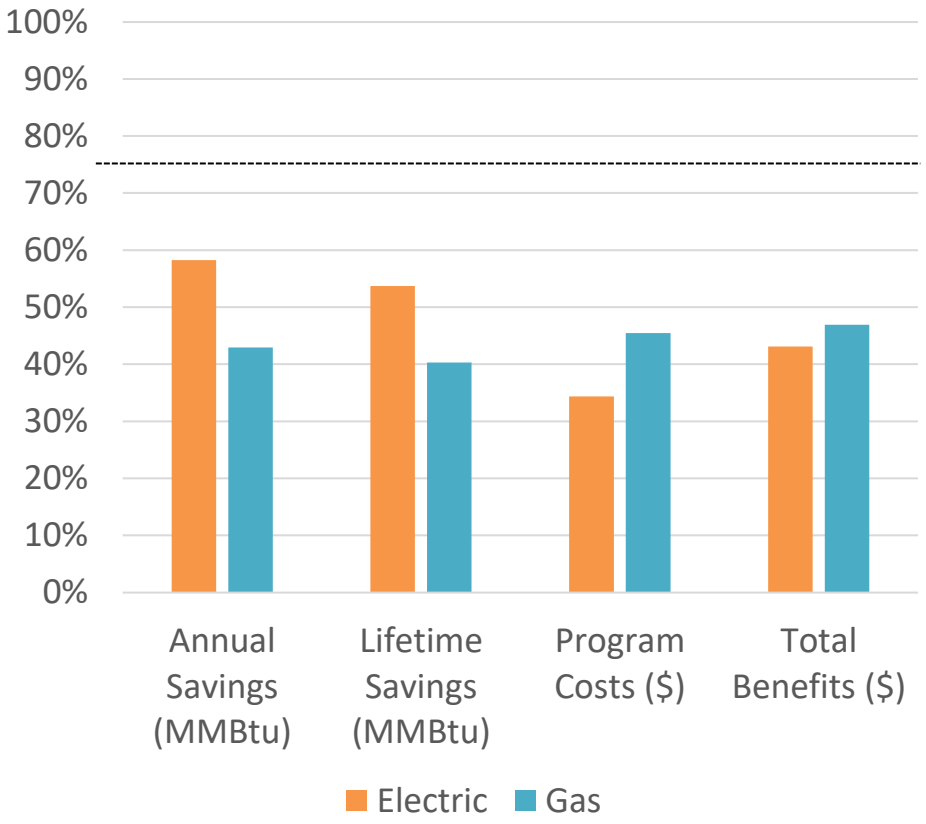
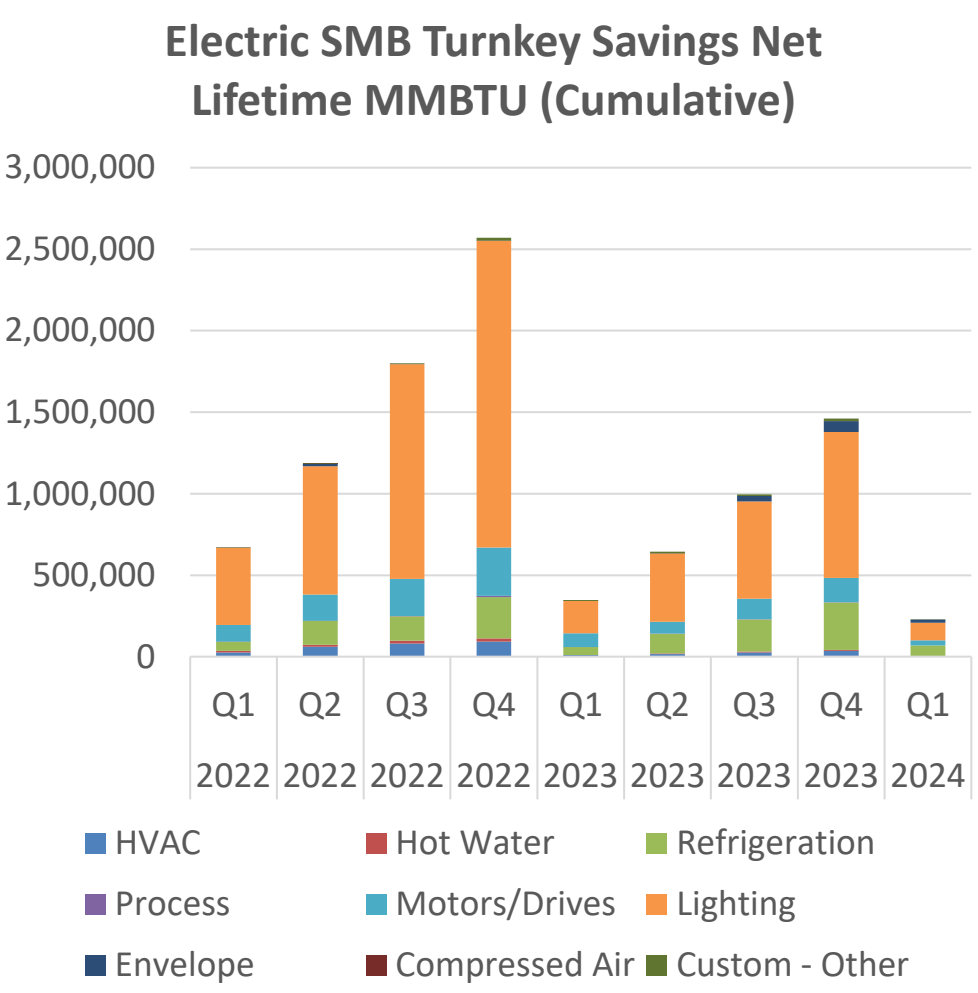
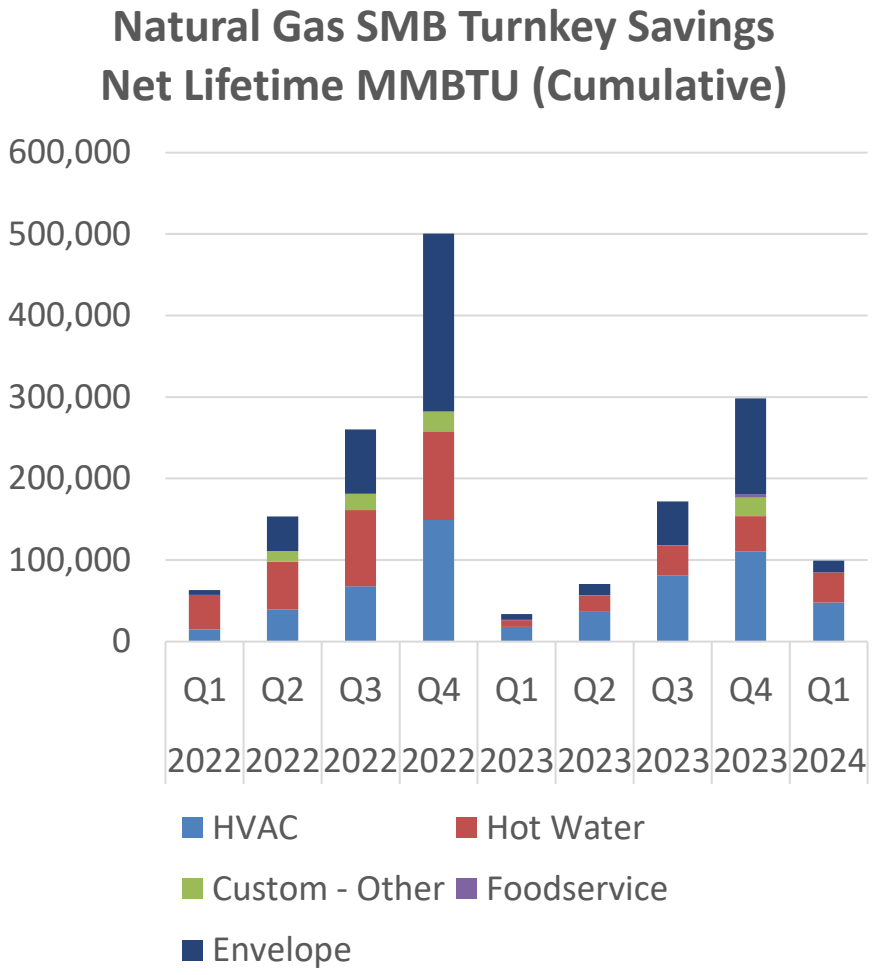
C&I Achievements as a Percentage of the 2024 Plan Values

25% of the Year Complete



C&I Achievements as a Percentage of 2022-2024 Plan Values

75% of the Plan Complete



KPI #6 C&I SMALL BUSINESS TURNKEY