



# APPENDICES





# Appendix Outline

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Next Steps & Process Overview

High-Level Review

Portfolio Data

Sector-Level Details



# NEXT STEPS & PROCESS OVERVIEW





# Next Steps

**August 24<sup>th</sup> Comment Deadline:** C-Team to finalize comments on 1<sup>st</sup> Draft 2024 EE Annual Plan, incorporating Council member input

- C-Team available for Council member 1-on-1 discussions throughout planning process
- Quantitative review ongoing, anticipated to continue beyond narrative comment submission

**September 14<sup>th</sup> & 28<sup>th</sup> Council Meetings:** Discussion and vote on Final Drafts of 2024 EE Annual Plan and 2024-2026 EE Three-Year Plan

- Will include C-Team findings from review of Final Draft
- Includes two meetings to ensure sufficient time to address any specific Council concerns

**October 1<sup>st</sup> Deadline:** Final Draft Plans filed with the PUC (combined filing)



# High-Level Process

Received 1<sup>st</sup> Draft 2024 EE Annual Plan on August 4<sup>th</sup>

- Narrative text on August 4<sup>th</sup>, BC Models on August 9<sup>th</sup>

Pending deliverables

- Updated Technical Reference Manual (Excel version shared August 15<sup>th</sup>)
- Rate and Bill Impact Models

Full narrative comments due back to RI Energy by August 24<sup>th</sup>

- Quantitative review to continue given need to finalize evaluation impacts



# HIGH-LEVEL REVIEW





# High-Level Review

2024 Annual Plan Narrative and Attachments generally include level of detail consistent with previous Plan Narratives

- Some specifics still require development or discussion with RI Energy including marketing strategies and how desired outcomes will be achieved

Many plan activities described in non-committal terms ('consider', 'explore', etc.), and lack specific goals, measurable outcomes, and clear timelines

- Equity commitments difficult to measure and assess, proposed pilots not yet developed with no stated timeline for doing so
- Workforce development efforts do not have expected impacts or outcomes associated with them

Formatting and aesthetic improvements implemented

Modest growth in savings goals a highlight, though more would increase benefits to RI



# Evaluation, Measurement & Verification

Some studies applicable to the 2024 Plan still in progress or pending

- Program Year 2021 Custom Electric Impact Evaluation
- Program Year 2021 Custom Gas Impact Evaluation
- C&I Free-Ridership and Spillover Study
- C&I Kitchen Equipment Industry Standard Practice Study

Anticipate updated Technical Reference Manual (TRM) Database week of 8/14

**Key consideration before Plan finalization: confirming proper input of EM&V factors from TRM Database into updated BCR Models**



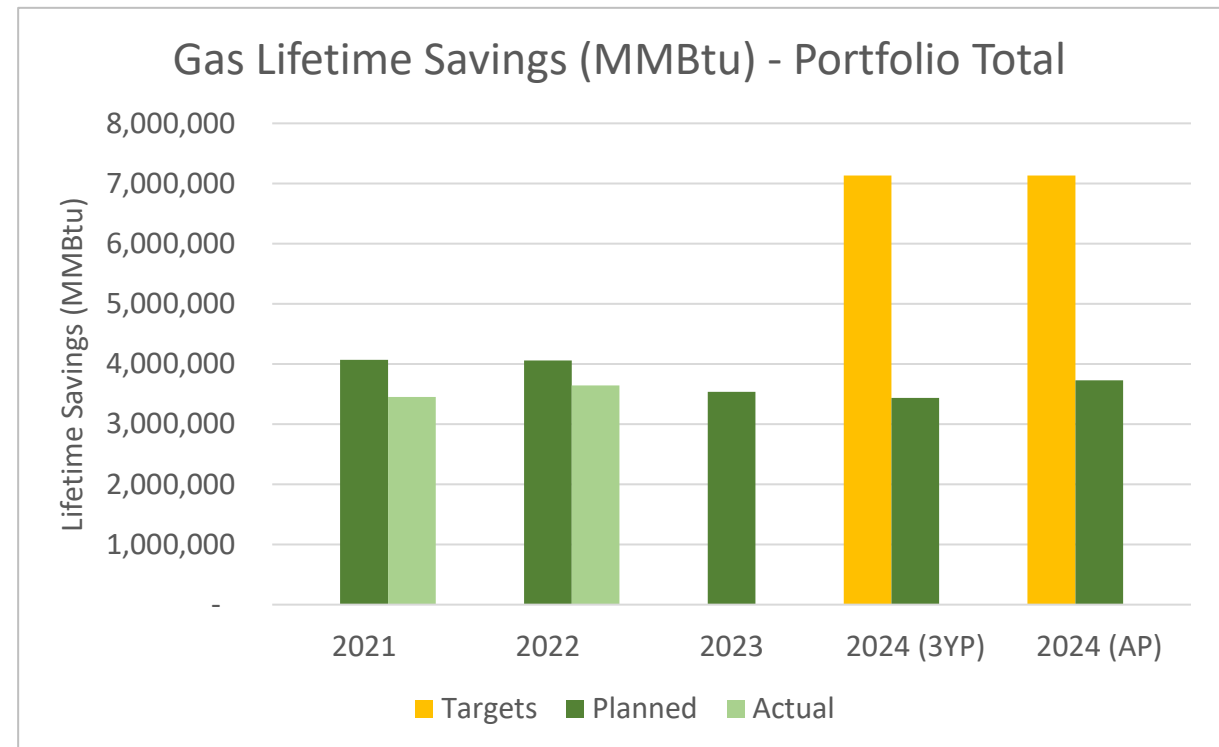
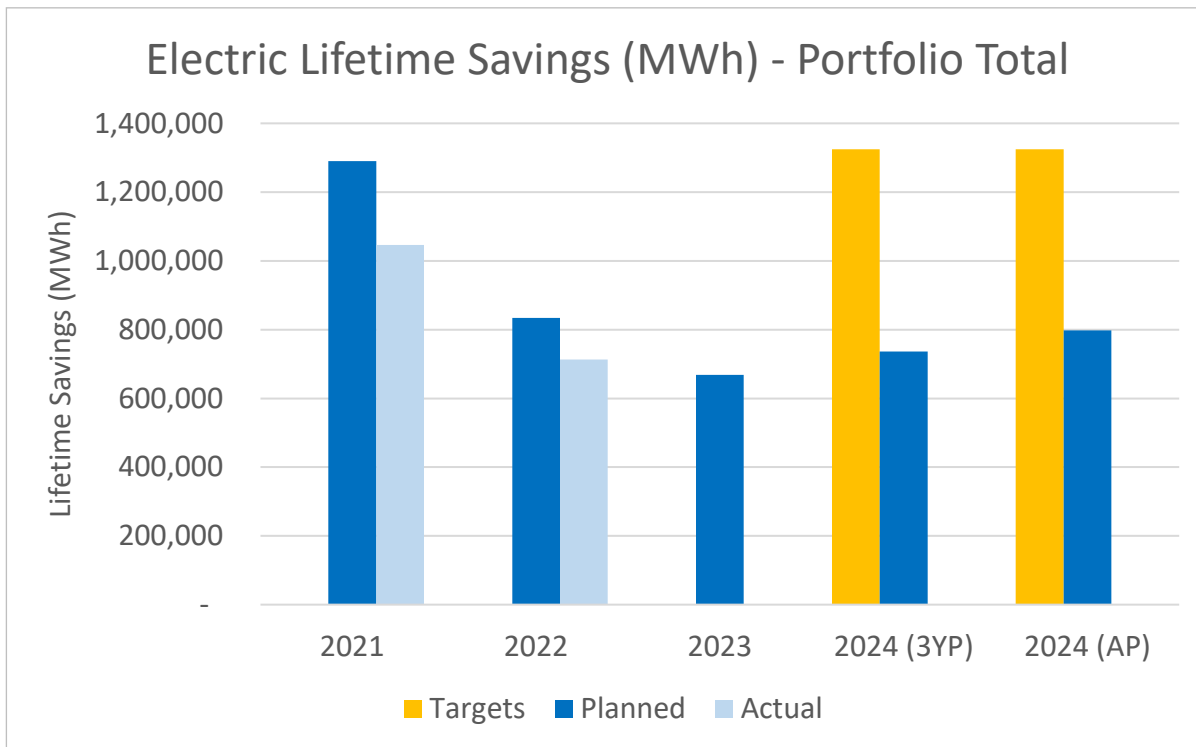


# PORTFOLIO DATA





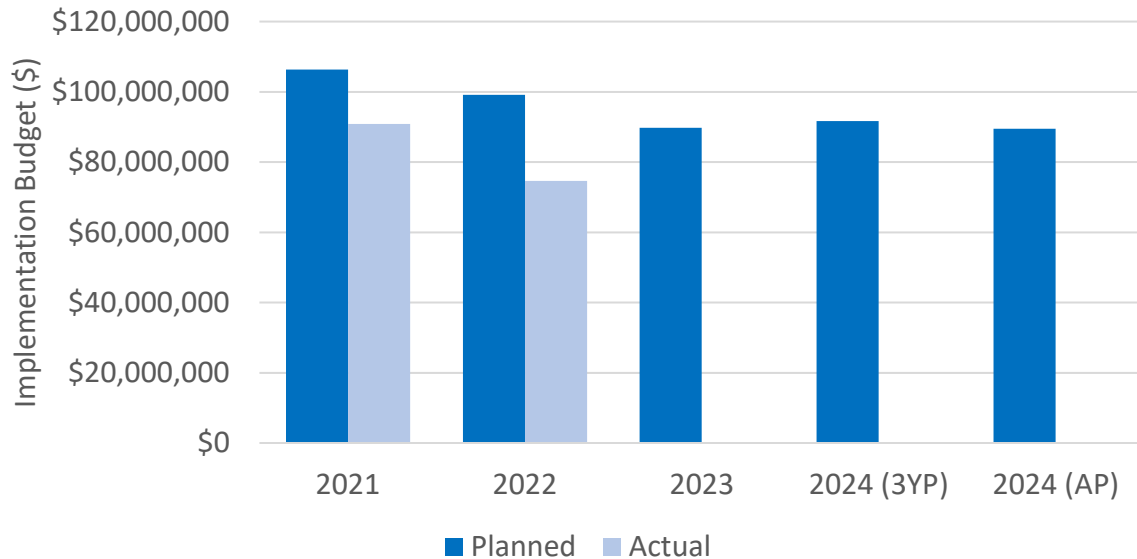
# Portfolio Lifetime Savings



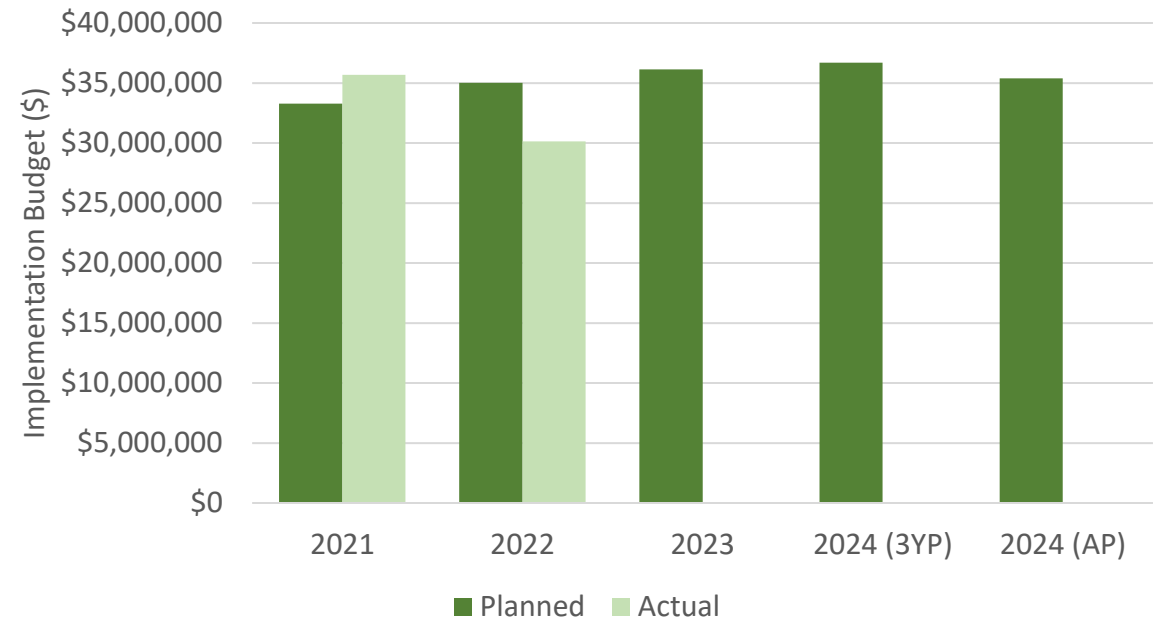


# Portfolio Implementation Budget

Electric Implementation Budget (\$) - Portfolio Total



Gas Implementation Budget (\$) - Portfolio Total

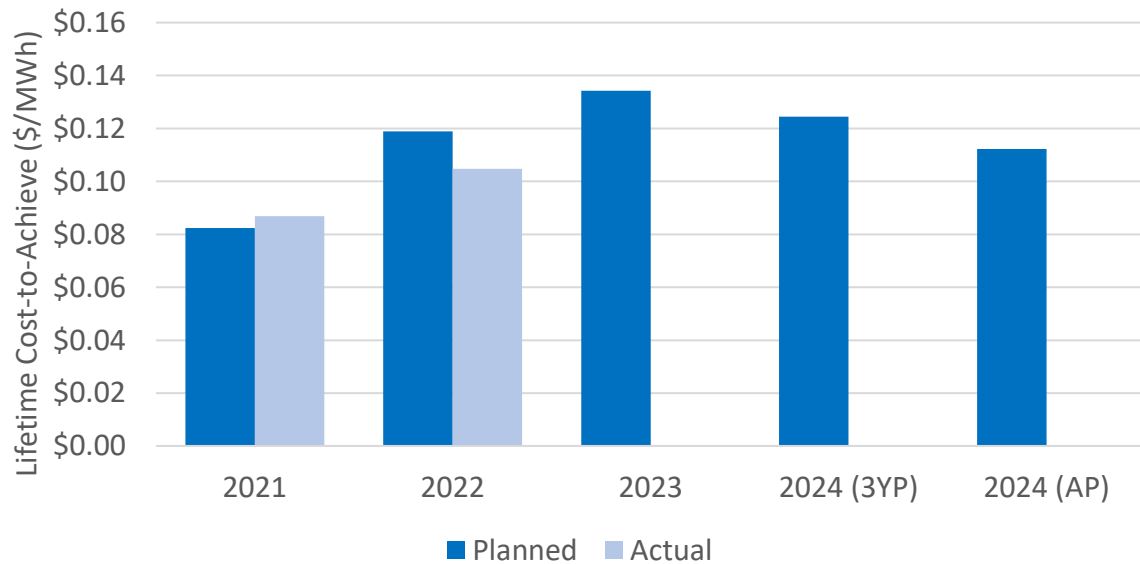




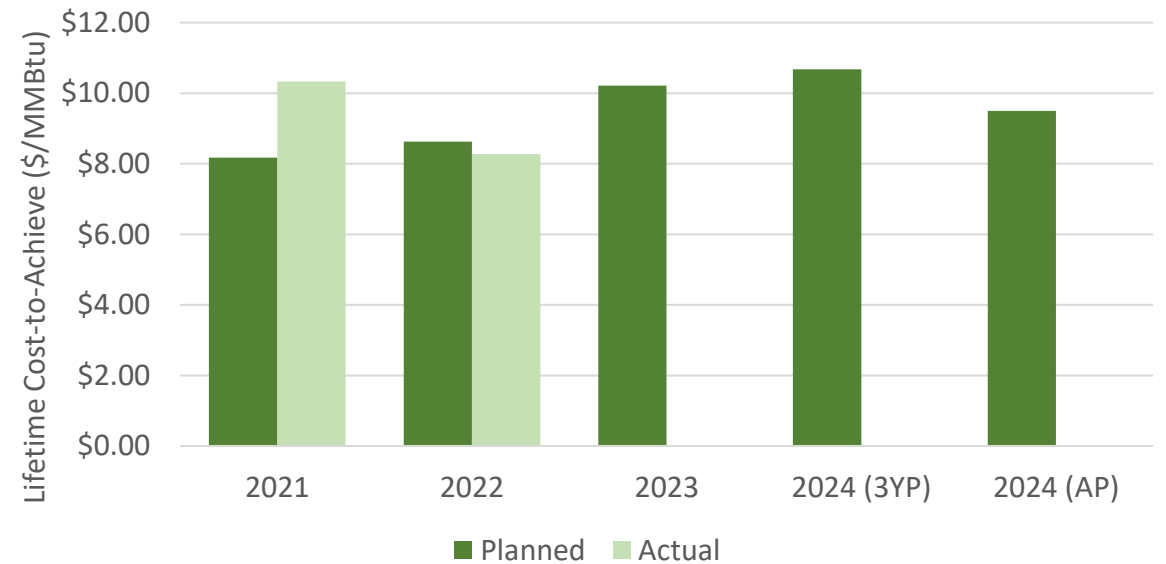
# Portfolio Cost to Achieve



Electric Cost to Achieve (\$/Lifetime kWh) - Portfolio Total



Gas Cost to Achieve (\$/Lifetime MMBtu) - Portfolio Total





# Electric Lifetime Savings

		LIFETIME MWhs						
% of 2024 (AP) Portfolio	Program	2024 Annual Plan	2024 Annual Plan Compared to 2022 Actuals		2024 Annual Plan Compared to 2023 Plan		2024 Annual Plan Compared to 2024 Three-Year Plan	
			MWh	%	MWh	%	MWh	%
8%	Small Business Direct Install	62,384	4,615	8%	4,606	8%	1,808	3%
26%	Large C&I New Construction	208,505	106,883	105%	50,907	32%	30,104	17%
35%	Large C&I Retrofit	278,449	-44,070	-14%	33,487	14%	27,857	11%
<b>69%</b>	<b>C&amp;I Total</b>	<b>549,338</b>	<b>67,428</b>	<b>14%</b>	<b>89,001</b>	<b>19%</b>	<b>59,770</b>	<b>12%</b>
5%	Income Eligible Single Family	37,034	9,043	32%	12,954	54%	-499	-1%
2%	Income Eligible Multifamily	14,278	-3,010	-17%	-3,353	-19%	-536	-4%
<b>6%</b>	<b>Income Eligible Total</b>	<b>51,312</b>	<b>6,033</b>	<b>13%</b>	<b>9,600</b>	<b>23%</b>	<b>-1,035</b>	<b>-2%</b>
2%	Residential New Construction	16,246	9,387	137%	3,102	24%	1,313	9%
14%	Residential HVAC	109,554	-4,890	-4%	38,499	54%	-7,430	-6%
2%	EnergyWise Single Family	16,940	4,257	34%	-1	0%	3,541	26%
1%	EnergyWise Multifamily	8,313	4,871	142%	-1,180	-12%	2,363	40%
3%	Home Energy Reports	24,350	-6,464	-21%	0	0%	2,335	11%
0%	ENERGY STAR® Lighting	0						
3%	Residential Consumer Products	21,719	4,160	24%	-9,965	-31%	384	2%
<b>25%</b>	<b>Residential Total</b>	<b>197,120</b>	<b>11,319</b>	<b>6%</b>	<b>30,455</b>	<b>18%</b>	<b>2,506</b>	<b>1%</b>
	<b>Residential &amp; Income Eligible Total</b>	<b>248,433</b>	<b>17,353</b>	<b>8%</b>	<b>40,056</b>	<b>19%</b>	<b>1,471</b>	<b>1%</b>
<b>100%</b>	<b>Portfolio Total</b>	<b>797,771</b>	<b>84,781</b>	<b>12%</b>	<b>129,056</b>	<b>19%</b>	<b>61,241</b>	<b>8%</b>



# Electric Budget

## IMPLEMENTATION BUDGET

% of 2024 (AP) Portfolio	Program	2024 Annual Plan	2024 Annual Plan Compared to 2022 Actuals		2024 Annual Plan Compared to 2023 Plan		2024 Annual Plan Compared to 2024 Three-Year Plan	
9%	Small Business Direct Install	\$8,164,331	\$2,436,631	43%	\$612,117	8%	\$510,305	7%
10%	Large C&I New Construction	\$9,339,358	\$5,023,958	116%	\$1,070,136	13%	\$958,658	11%
26%	Large C&I Retrofit	\$23,292,118	\$4,733,118	26%	\$1,115,898	5%	\$816,938	4%
0%	C&I Financing	\$0	-\$2,000,000	-100%	-\$2,000,000	-100%	-\$2,026,962	-100%
0%	Community Based Initiatives - C&I	\$11,447	\$2,647	30%	-\$82,014	-88%	-\$83,274	-88%
0%	Commercial Pilots	\$0	\$0		\$0		\$0	
0%	C&I ConnectedSolutions	\$0	\$0		\$0		\$0	
0%	Commercial Workforce Development	\$157,500	\$157,500		\$0	0%	-\$2,123	-1%
46%	<b>C&amp;I Total</b>	<b>\$40,964,753</b>	<b>\$10,353,853</b>	<b>34%</b>	<b>\$716,137</b>	<b>2%</b>	<b>\$173,540</b>	<b>0%</b>
14%	Income Eligible Single Family	\$12,326,762	\$2,118,762	21%	\$483,540	4%	\$323,880	3%
3%	Income Eligible Multifamily	\$2,779,783	\$207,683	8%	-\$556,035	-17%	-\$601,006	-18%
0%	Income Eligible Workforce Development	\$0	\$0		\$0		\$0	
17%	<b>Income Eligible Total</b>	<b>\$15,106,545</b>	<b>\$2,326,445</b>	<b>18%</b>	<b>-\$72,496</b>	<b>0%</b>	<b>-\$277,126</b>	<b>-2%</b>
2%	Residential New Construction	\$1,352,525	\$250,525	23%	-\$239,427	-15%	-\$260,888	-16%
4%	Residential HVAC	\$3,883,586	-\$442,514	-10%	-\$1,457,191	-27%	-\$1,529,191	-28%
18%	EnergyWise Single Family	\$16,130,217	\$1,772,717	12%	\$544,955	3%	\$334,848	2%
1%	EnergyWise Multifamily	\$1,086,812	-\$155,288	-13%	-\$254,431	-19%	-\$272,512	-20%
2%	Home Energy Reports	\$2,114,354	-\$275,346	-12%	-\$31,442	-1%	-\$60,370	-3%
0%	ENERGY STAR® Lighting	\$0	\$0		\$0		\$0	
2%	Residential Consumer Products	\$2,078,933	\$188,033	10%	-\$410,132	-16%	-\$443,687	-18%
0%	Energy Efficiency Education	\$0	\$0		\$0		\$0	
0%	Comprehensive Marketing - Residential	\$311,506	\$77,306	33%	\$1,022	0%	-\$3,164	-1%
0%	Community Based Initiatives - Residential	\$137,548	\$137,548		-\$143,016	-51%	-\$146,798	-52%
0%	Residential ConnectedSolutions	\$0	\$0		\$0		\$0	
0%	Residential Pilots	\$0	\$0		\$0		\$0	
0%	Residential Workforce Development	\$0	\$0		\$0		\$0	
30%	<b>Residential Total</b>	<b>\$27,095,481</b>	<b>\$1,552,981</b>	<b>6%</b>	<b>-\$1,989,662</b>	<b>-7%</b>	<b>-\$2,381,762</b>	<b>-8%</b>
	<b>Residential &amp; Income Eligible Total</b>	<b>\$42,202,026</b>	<b>\$3,879,426</b>	<b>10%</b>	<b>-\$2,062,157</b>	<b>-5%</b>	<b>-\$2,658,889</b>	<b>-6%</b>
1%	EERMC	\$1,045,639	\$638,839	157%	\$451,368	76%	\$443,356	74%
2%	OER	\$1,568,459	-\$12,941	-1%	\$677,052	76%	-\$109,541	-7%
4%	Rhode Island Infrastructure Bank	\$3,737,500	\$2,500	0%	\$9	0%	\$9	0%
7%	<b>Regulatory Total</b>	<b>\$6,351,598</b>	<b>\$628,398</b>	<b>11%</b>	<b>\$1,128,428</b>	<b>22%</b>	<b>\$333,824</b>	<b>6%</b>
100%	<b>Portfolio Total</b>	<b>\$89,518,378</b>	<b>\$14,861,678</b>	<b>20%</b>	<b>-\$217,592</b>	<b>0%</b>	<b>-\$2,151,524</b>	<b>-2%</b>



# Electric Lifetime Cost to Achieve (\$/kWh)

## \$/LIFETIME kWh

Program	2024 Annual Plan	2024 Annual Plan Compared to 2022 Actuals		2024 Annual Plan Compared to 2023 Plan		2024 Annual Plan Compared to 2024 Three-Year Plan	
		Value	%	Value	%	Value	%
Small Business Direct Install	\$0.13	\$0.03	32%	\$0.00	0%	\$0.00	4%
Large C&I New Construction	\$0.04	\$0.00	5%	-\$0.01	-15%	\$0.00	-5%
Large C&I Retrofit	\$0.08	\$0.03	45%	-\$0.01	-8%	-\$0.01	-7%
<b>C&amp;I Total</b>	<b>\$0.07</b>	\$0.01	17%	-\$0.01	-15%	<b>-\$0.01</b>	<b>-11%</b>
Income Eligible Single Family	\$0.33	-\$0.03	-9%	-\$0.16	-32%	\$0.01	4%
Income Eligible Multifamily	\$0.19	\$0.05	31%	\$0.01	3%	-\$0.03	-15%
<b>Income Eligible Total</b>	<b>\$0.29</b>	\$0.01	4%	-\$0.07	-19%	<b>\$0.00</b>	<b>0%</b>
Residential New Construction	\$0.08	-\$0.08	-48%	-\$0.04	-31%	-\$0.02	-23%
Residential HVAC	\$0.04	\$0.00	-6%	-\$0.04	-53%	-\$0.01	-23%
EnergyWise Single Family	\$0.95	-\$0.18	-16%	\$0.03	3%	-\$0.23	-19%
EnergyWise Multifamily	\$0.13	-\$0.23	-64%	-\$0.01	-7%	-\$0.10	-43%
Home Energy Reports	\$0.09	\$0.01	12%	\$0.00	-1%	-\$0.01	-12%
ENERGY STAR® Lighting		\$0.00		\$0.00		\$0.00	
Residential Consumer Products	\$0.10	-\$0.01	-11%	\$0.02	22%	-\$0.02	-19%
<b>Residential Total</b>	<b>\$0.14</b>	\$0.00	0%	-\$0.04	-21%	<b>-\$0.01</b>	<b>-9%</b>
<b>Residential &amp; Income Eligible Total</b>	<b>\$0.17</b>	\$0.00	2%	-\$0.04	-20%	<b>-\$0.01</b>	<b>-6%</b>
<b>Portfolio Total</b>	<b>\$0.11</b>	\$0.01	7%	-\$0.02	-16%	<b>-\$0.01</b>	<b>-10%</b>



# Gas Lifetime Savings

		LIFETIME MMBtus							
% of 2024 (AP) Portfolio	Program	2024 Annual Plan	2024 Annual Plan Compared to 2022 Actuals		2024 Annual Plan Compared to 2023 Plan		2024 Annual Plan Compared to 2024 Three-Year Plan		
28%	Large C&I New Construction	1,034,676	453,300	78%	317,971	44%	353,863	52%	
27%	Large C&I Retrofit	1,002,980	-371,901	-27%	-13,539	-1%	-150,211	-13%	
3%	Small Business Direct Install	120,064	41,108	52%	-10,130	-8%	-12,759	-10%	
2%	C&I Multifamily	63,832	4,657	8%	-813	-1%	-489	-1%	
<b>60%</b>	<b>C&amp;I Total</b>	<b>2,221,552</b>	127,164	6%	293,490	15%	190,404	9%	
3%	Income Eligible Single Family	121,326	-8,302	-6%	-47,854	-28%	-446	0%	
4%	Income Eligible Multifamily	161,966	-73,740	-31%	-10,498	-6%	-9,707	-6%	
<b>8%</b>	<b>Income Eligible Total</b>	<b>283,293</b>	-82,041	-22%	-58,352	-17%	-10,154	-3%	
11%	Residential HVAC	392,554	1,119	0%	-125,017	-24%	53,582	16%	
15%	EnergyWise Single Family	556,247	29,796	6%	66,234	14%	48,697	10%	
3%	EnergyWise Multifamily	104,179	51,500	98%	-6,249	-6%	-5,298	-5%	
2%	Home Energy Reports	91,640	-24,335	-21%	0	0%	0	0%	
2%	Residential New Construction	77,871	-18,151	-19%	19,395	33%	11,921	18%	
<b>33%</b>	<b>Residential Total</b>	<b>1,222,491</b>	39,929	3%	-45,638	-4%	108,903	10%	
	<b>Residential &amp; Income Eligible Total</b>	<b>1,505,783</b>	-42,113	-3%	-103,989	-6%	98,749	7%	
<b>100%</b>	<b>Portfolio Total</b>	<b>3,727,336</b>	85,052	2%	189,500	5%	289,153	8%	





# Gas Budget

## IMPLEMENTATION BUDGET

% of 2024 (AP) Portfolio	Program	2024 Annual Plan	2024 Annual Plan Compared to 2022 Actuals		2024 Annual Plan Compared to 2023 Plan		2024 Annual Plan Compared to 2024 Three-Year Plan	
7%	Large C&I New Construction	\$2,357,905	-\$319,195	-12%	-\$460,751	-16%	-\$498,749	-17%
13%	Large C&I Retrofit	\$4,635,304	-\$284,096	-6%	-\$4,289	0%	-\$66,836	-1%
2%	Small Business Direct Install	\$750,818	\$331,918	79%	\$60,985	9%	\$51,685	7%
5%	C&I Multifamily	\$1,625,433	\$1,134,633	231%	\$734,184	82%	\$722,169	80%
0%	Comprehensive Marketing - Commercial and Industrial	\$0	\$0		\$0		\$0	
0%	Commercial Pilots	\$0	-\$67,200	-100%	-\$12,422	-100%	-\$12,589	-100%
0%	Finance Costs	\$0	\$0		\$0		\$0	
0%	Community Based Initiatives - C&I	\$3,699	\$799	28%	-\$27,455	-88%	-\$27,875	-88%
4%	Rhode Island Infrastructure Bank	\$1,262,500	\$1,262,500		-\$9	0%	-\$9	0%
0%	Commercial Workforce Development	\$67,500	\$67,500		\$0	0%	-\$910	-1%
<b>30%</b>	<b>C&amp;I Total</b>	<b>\$10,703,160</b>	<b>\$2,126,860</b>	<b>25%</b>	<b>\$290,243</b>	<b>3%</b>	<b>\$166,885</b>	<b>2%</b>
13%	Income Eligible Single Family	\$4,599,833	\$102,333	2%	-\$829,155	-15%	-\$902,344	-16%
9%	Income Eligible Multifamily	\$3,055,455	-\$30,245	-1%	-\$159,974	-5%	-\$203,322	-6%
0%	Income Eligible Workforce Development	\$0	\$0		\$0		\$0	
<b>22%</b>	<b>Income Eligible Total</b>	<b>\$7,655,288</b>	<b>\$72,088</b>	<b>1%</b>	<b>-\$989,129</b>	<b>-11%</b>	<b>-\$1,105,666</b>	<b>-13%</b>
6%	Residential HVAC	\$2,203,920	-\$249,280	-10%	-\$1,382,961	-39%	-\$1,431,316	-39%
31%	EnergyWise Single Family	\$11,040,889	\$1,957,489	22%	\$1,167,752	12%	\$1,034,651	10%
4%	EnergyWise Multifamily	\$1,425,328	\$877,728	160%	-\$60,077	-4%	-\$80,101	-5%
1%	Home Energy Reports	\$353,998	-\$25,402	-7%	-\$6,503	-2%	-\$11,363	-3%
2%	Residential New Construction	\$642,743	\$50,943	9%	\$21,223	3%	\$12,844	2%
0%	Comprehensive Marketing - Residential	\$68,930	\$68,930		-\$153	0%	-\$1,084	-2%
0%	Residential Pilots	\$0	\$0		\$0		\$0	
0%	Community Based Initiatives - Residential	\$45,849	-\$27,151	-37%	-\$47,612	-51%	-\$48,872	-52%
0%	Residential Workforce Development	\$0	\$0		\$0		\$0	
<b>45%</b>	<b>Residential Total</b>	<b>\$15,781,657</b>	<b>\$2,653,257</b>	<b>20%</b>	<b>-\$308,331</b>	<b>-2%</b>	<b>-\$525,242</b>	<b>-3%</b>
	<b>Residential &amp; Income Eligible Total</b>	<b>\$23,436,945</b>	<b>\$2,725,345</b>	<b>13%</b>	<b>-\$1,297,460</b>	<b>-5%</b>	<b>-\$1,630,908</b>	<b>-7%</b>
1%	EERMC	\$497,722	\$373,722	301%	\$100,843	25%	\$95,492	24%
2%	OER	\$746,583	\$30,683	4%	\$151,264	25%	\$53,083	8%
<b>4%</b>	<b>Regulatory Total</b>	<b>\$1,244,304</b>	<b>\$404,404</b>	<b>48%</b>	<b>\$252,106</b>	<b>25%</b>	<b>\$148,575</b>	<b>14%</b>
<b>100%</b>	<b>Portfolio Total</b>	<b>\$35,384,409</b>	<b>\$5,256,609</b>	<b>17%</b>	<b>-\$755,111</b>	<b>-2%</b>	<b>-\$1,315,448</b>	<b>-4%</b>



# Gas Lifetime Cost to Achieve (\$/MMBtu)

## \$/LIFETIME MMBtu

Program	2024 Annual Plan	2024 Annual Plan Compared to 2022 Actuals		2024 Annual Plan Compared to 2023 Plan		2024 Annual Plan Compared to 2024 Three-Year Plan	
		Value	%	Value	%	Value	%
Large C&I New Construction	\$2.28	-\$2.33	-51%	-\$1.65	-42%	-\$1.92	-46%
Large C&I Retrofit	\$4.62	\$1.04	29%	\$0.06	1%	\$0.54	13%
Small Business Direct Install	\$6.25	\$0.95	18%	\$0.95	18%	\$0.99	19%
C&I Multifamily	\$25.46	\$17.17	207%	\$11.68	85%	\$11.42	81%
<b>C&amp;I Total</b>	<b>\$4.82</b>	<b>\$0.72</b>	<b>18%</b>	<b>-\$0.58</b>	<b>-11%</b>	<b>-\$0.37</b>	<b>-7%</b>
Income Eligible Single Family	\$37.91	\$3.22	9%	\$5.82	18%	-\$7.27	-16%
Income Eligible Multifamily	\$18.86	\$5.77	44%	\$0.22	1%	-\$0.12	-1%
<b>Income Eligible Total</b>	<b>\$27.02</b>	<b>\$6.27</b>	<b>30%</b>	<b>\$1.72</b>	<b>7%</b>	<b>-\$2.83</b>	<b>-9%</b>
Residential HVAC	\$5.61	-\$0.65	-10%	-\$1.32	-19%	-\$5.11	-48%
EnergyWise Single Family	\$19.85	\$2.59	15%	-\$0.30	-1%	\$0.13	1%
EnergyWise Multifamily	\$13.68	\$3.29	32%	\$0.23	2%	-\$0.07	-1%
Home Energy Reports	\$3.86	\$0.59	18%	-\$0.07	-2%	-\$0.12	-3%
Residential New Construction	\$8.25	\$2.09	34%	-\$2.37	-22%	-\$1.30	-14%
<b>Residential Total</b>	<b>\$12.91</b>	<b>\$1.81</b>	<b>16%</b>	<b>\$0.22</b>	<b>2%</b>	<b>-\$1.73</b>	<b>-12%</b>
<b>Residential &amp; Income Eligible Total</b>	<b>\$15.56</b>	<b>\$2.18</b>	<b>16%</b>	<b>\$0.20</b>	<b>1%</b>	<b>-\$2.25</b>	<b>-13%</b>
<b>Portfolio Total</b>	<b>\$9.49</b>	<b>\$1.22</b>	<b>15%</b>	<b>-\$0.72</b>	<b>-7%</b>	<b>-\$1.18</b>	<b>-11%</b>



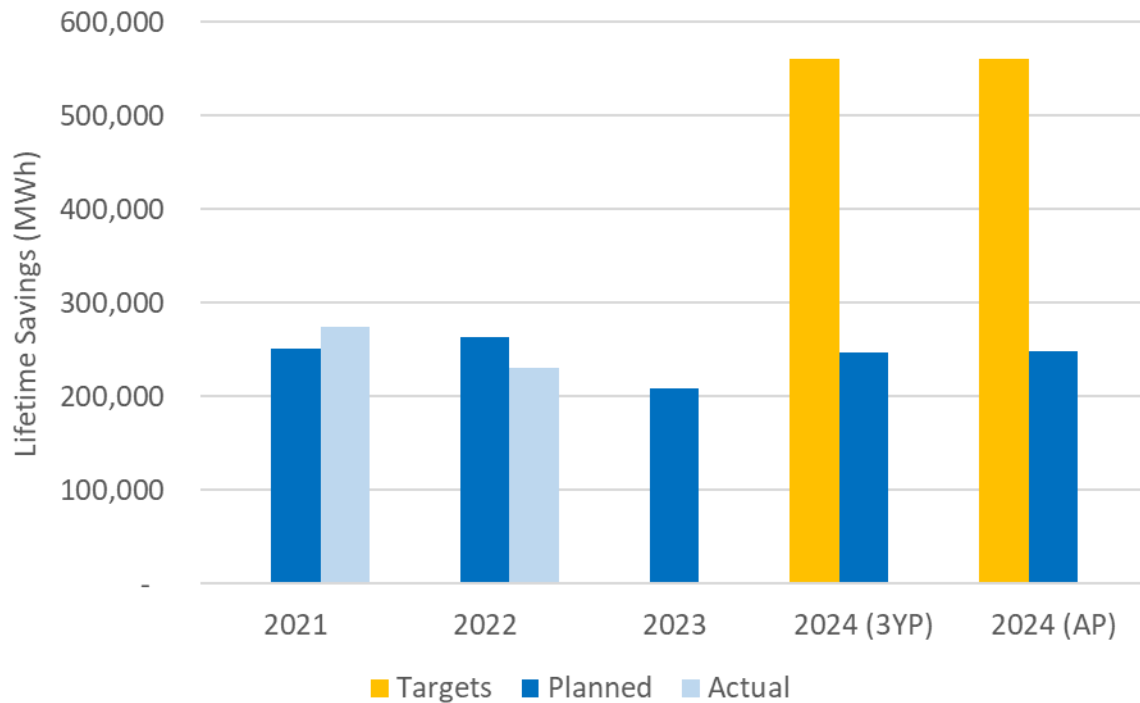
# SECTOR-LEVEL DETAILS





# Res & IES Lifetime Savings vs. Targets

Electric Lifetime Savings (MWh) - Residential & Income Eligible Total

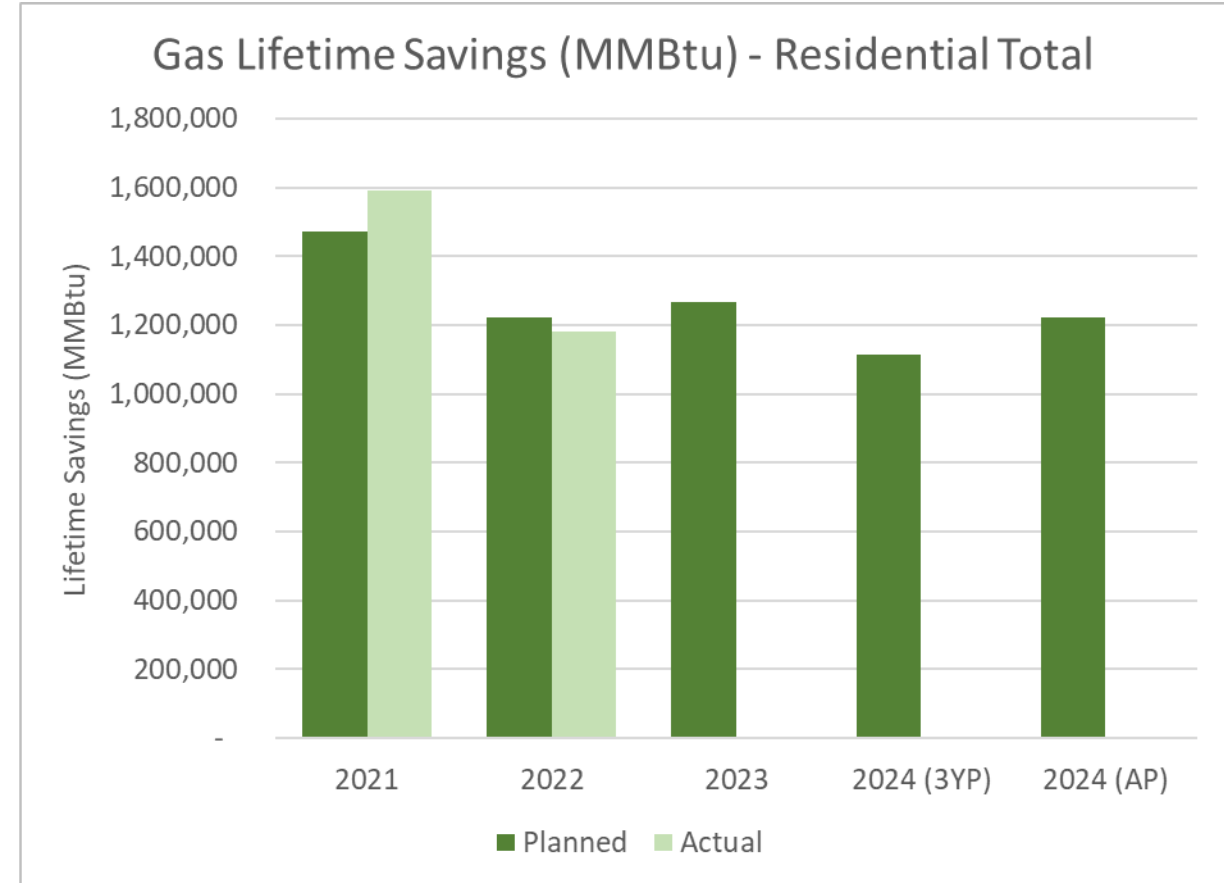
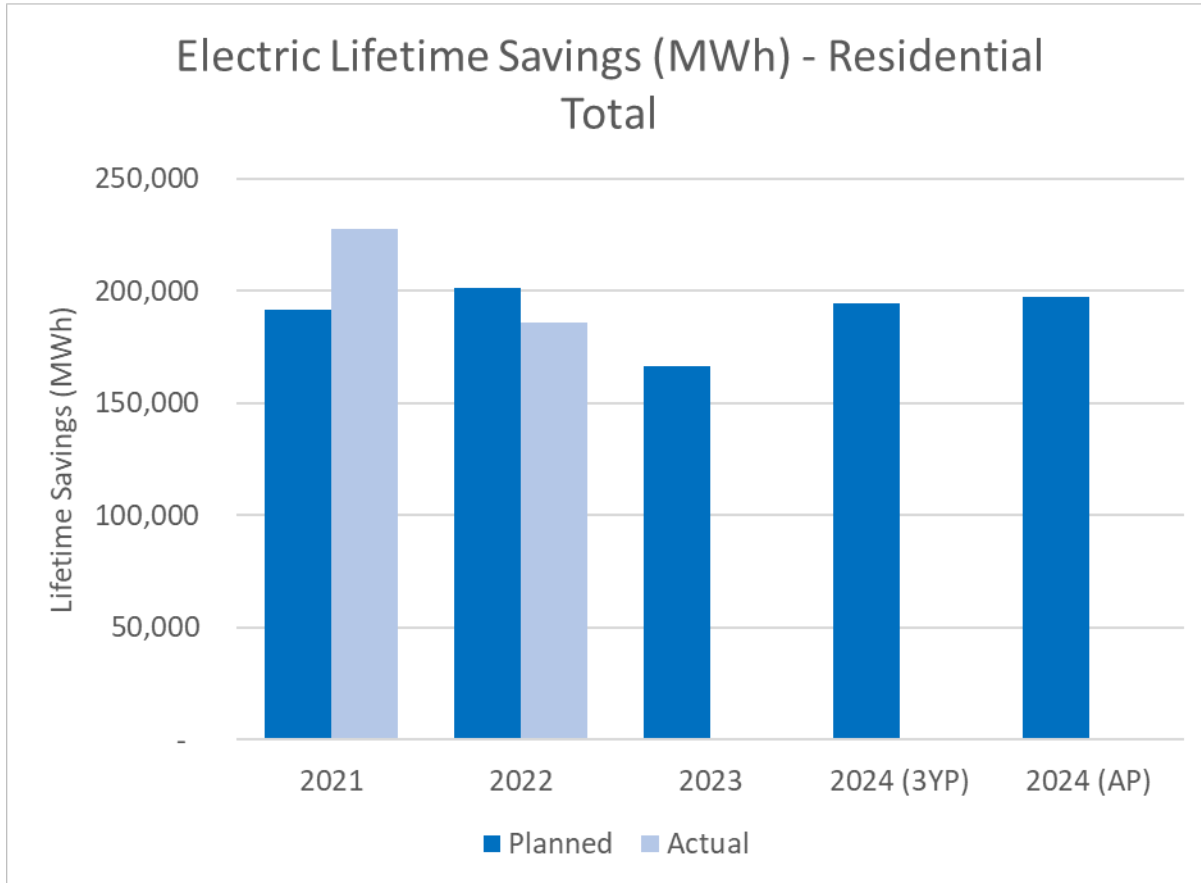


Gas Lifetime Savings (MMBtu) - Residential & Income Eligible Total





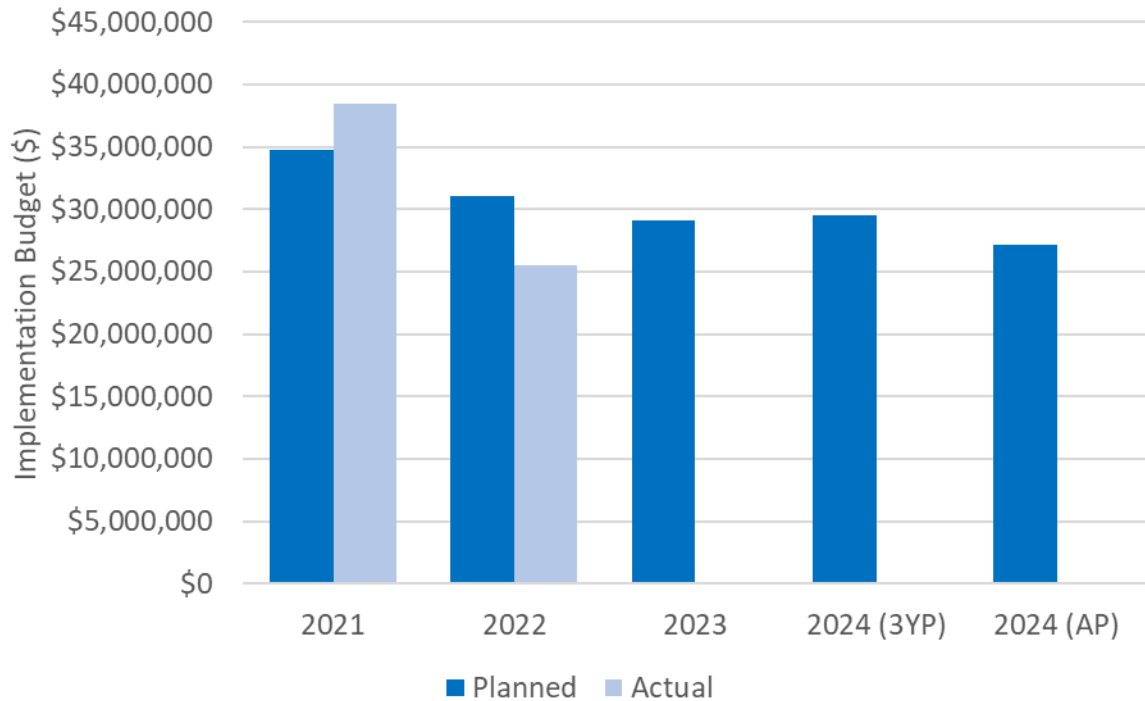
# Residential Lifetime Savings



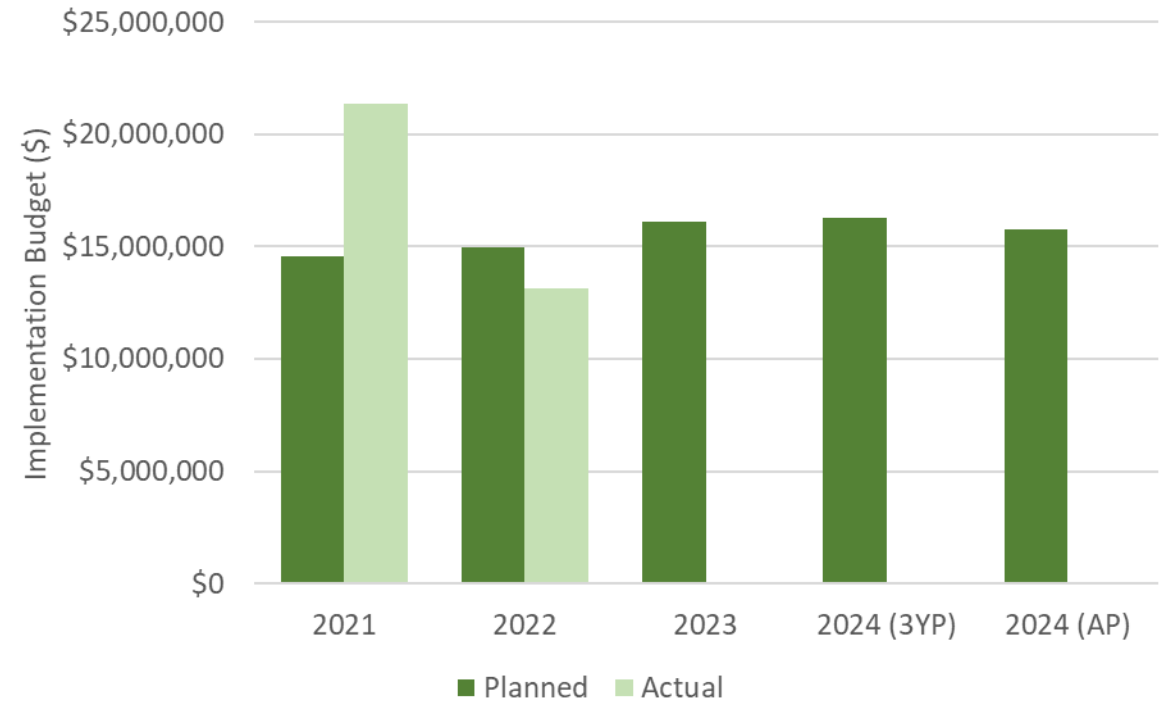


# Residential Implementation Budget

### Electric Implementation Budget (\$) - Residential Total



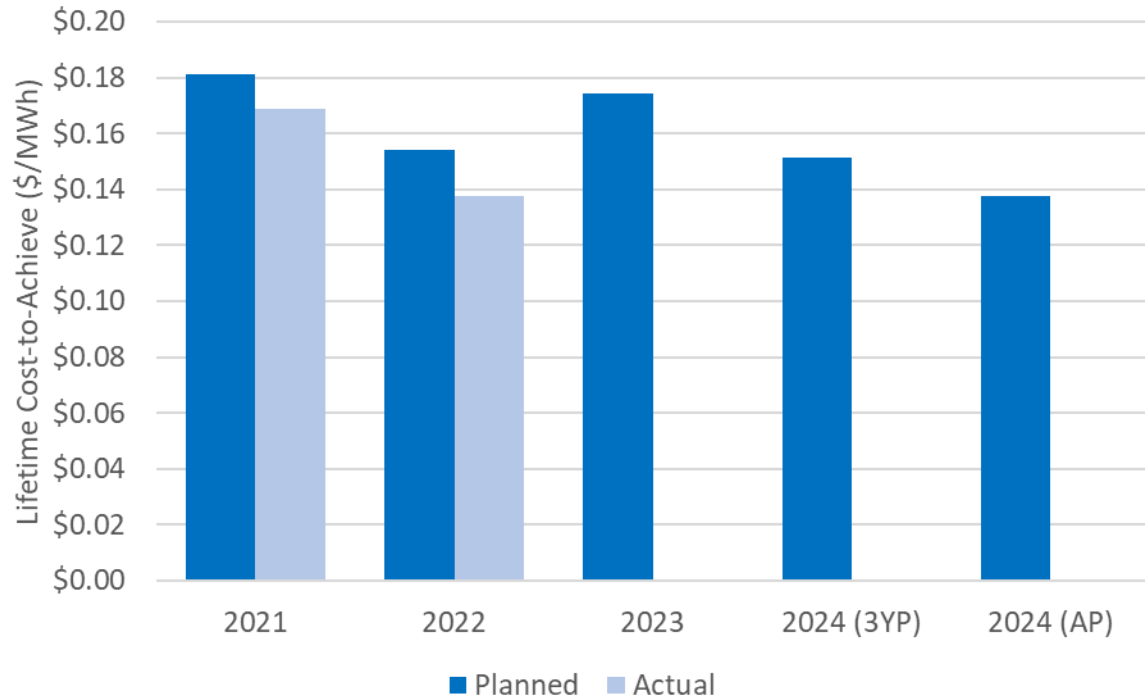
### Gas Implementation Budget (\$) - Residential Total



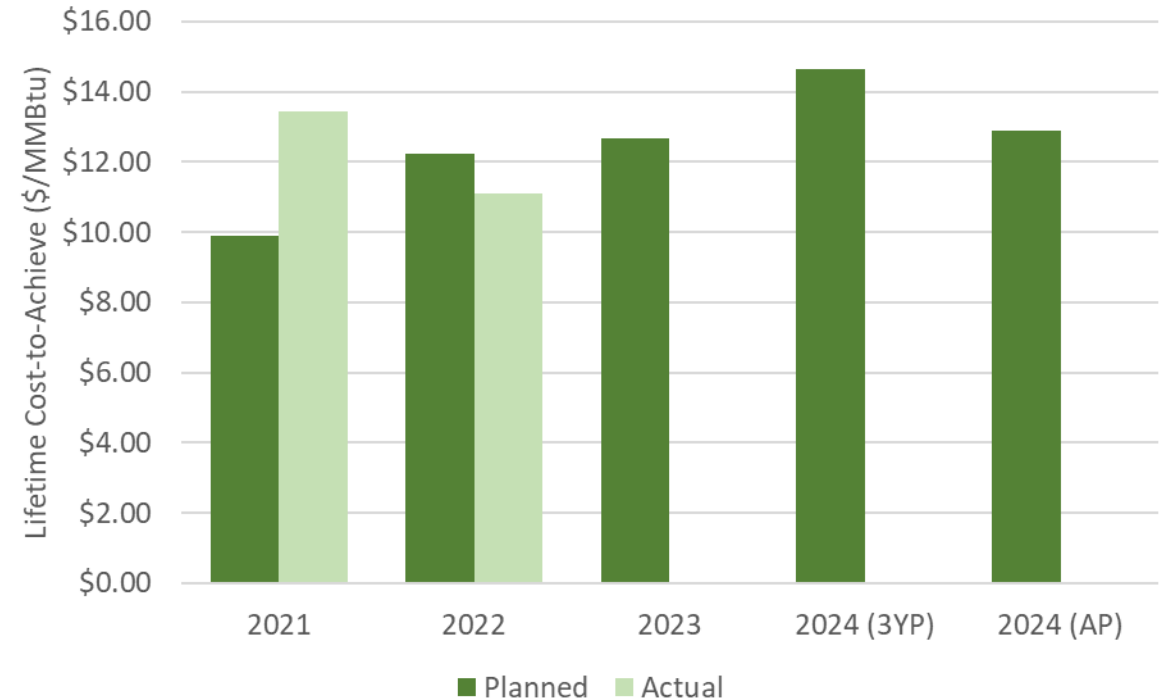


# Residential Lifetime Cost-to-Achieve

Electric Cost to Achieve (\$/Lifetime kWh) - Residential Total

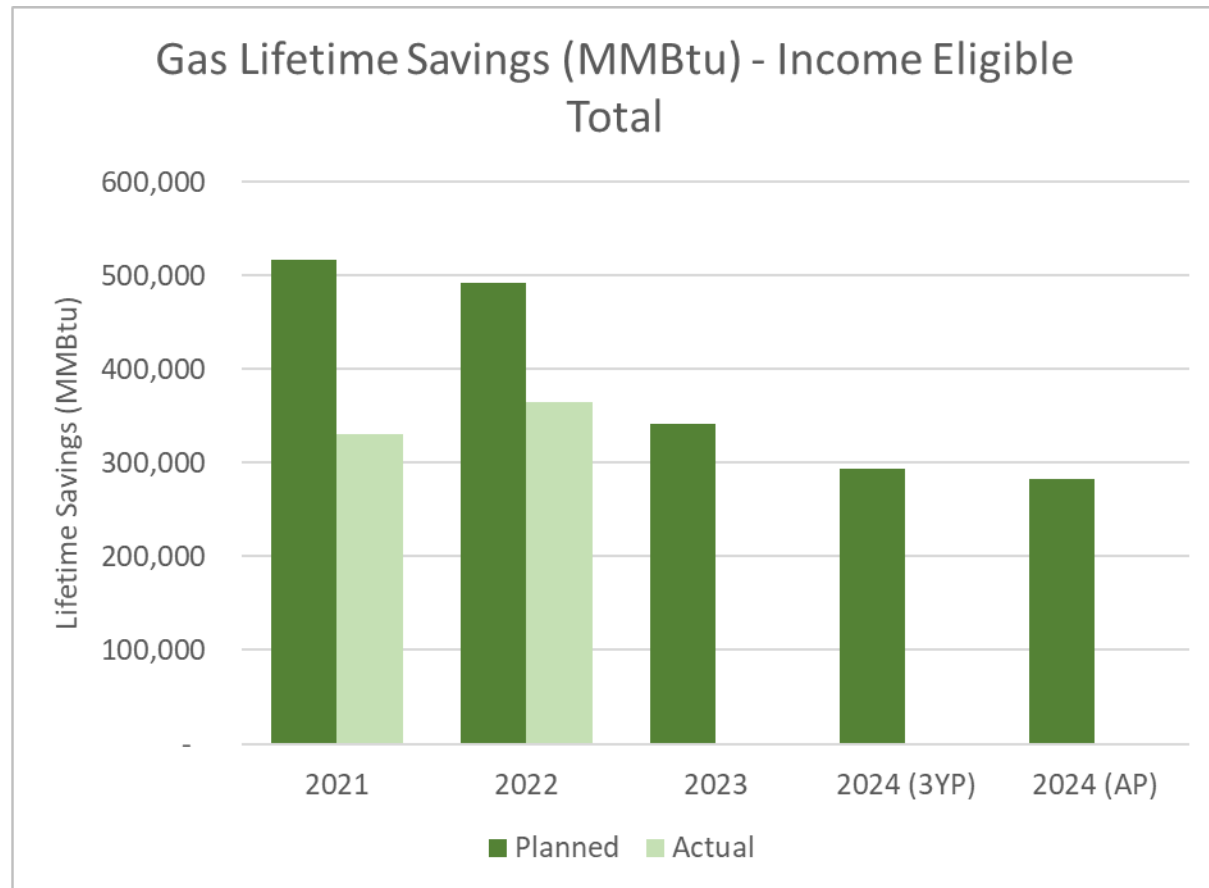
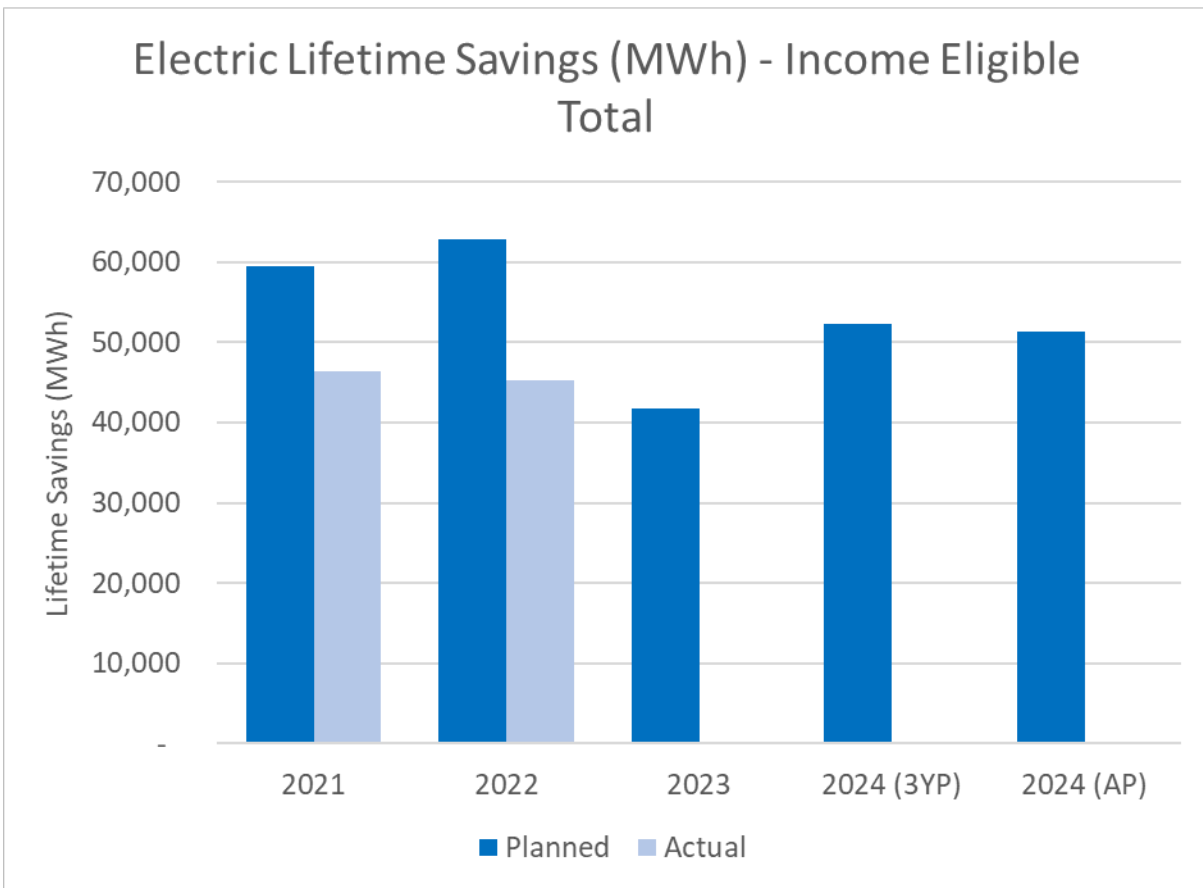


Gas Cost to Achieve (\$/Lifetime MMBtu) - Residential Total





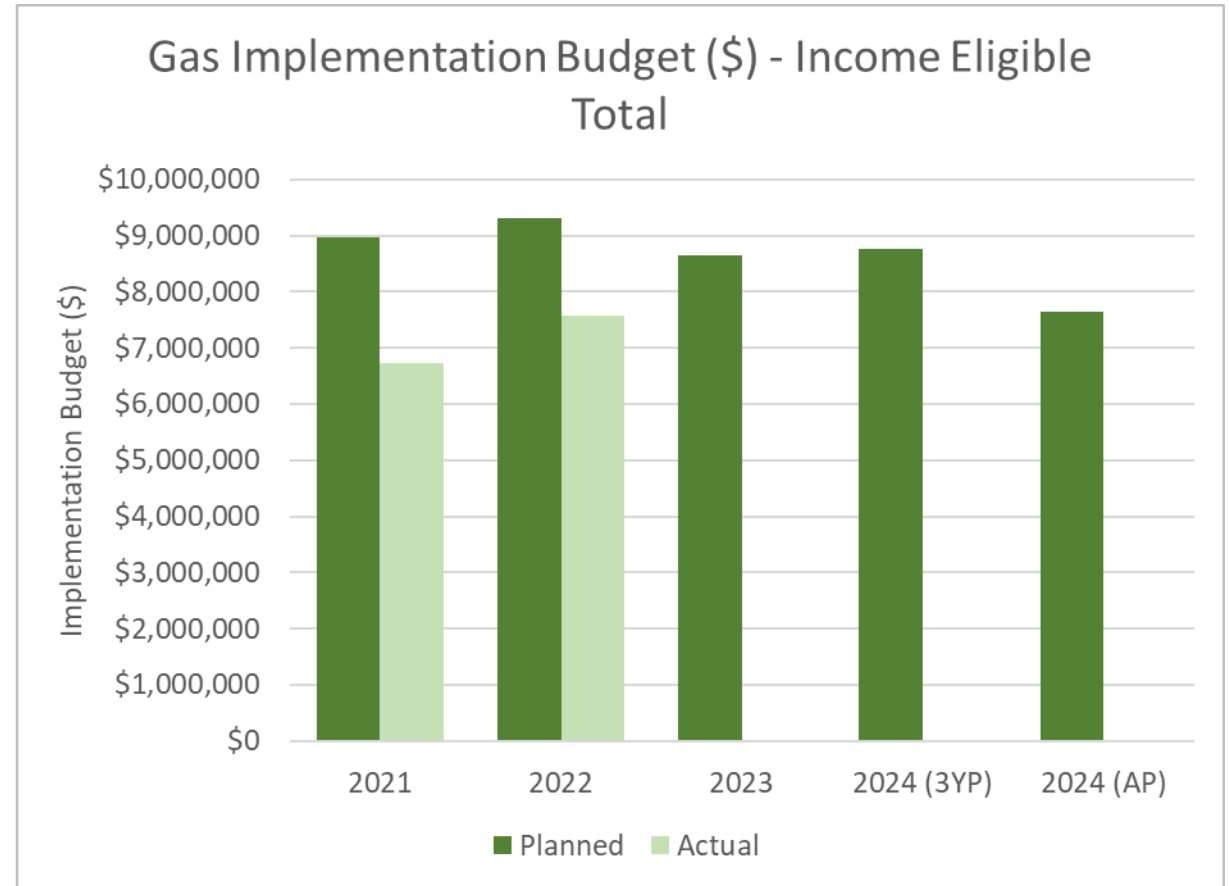
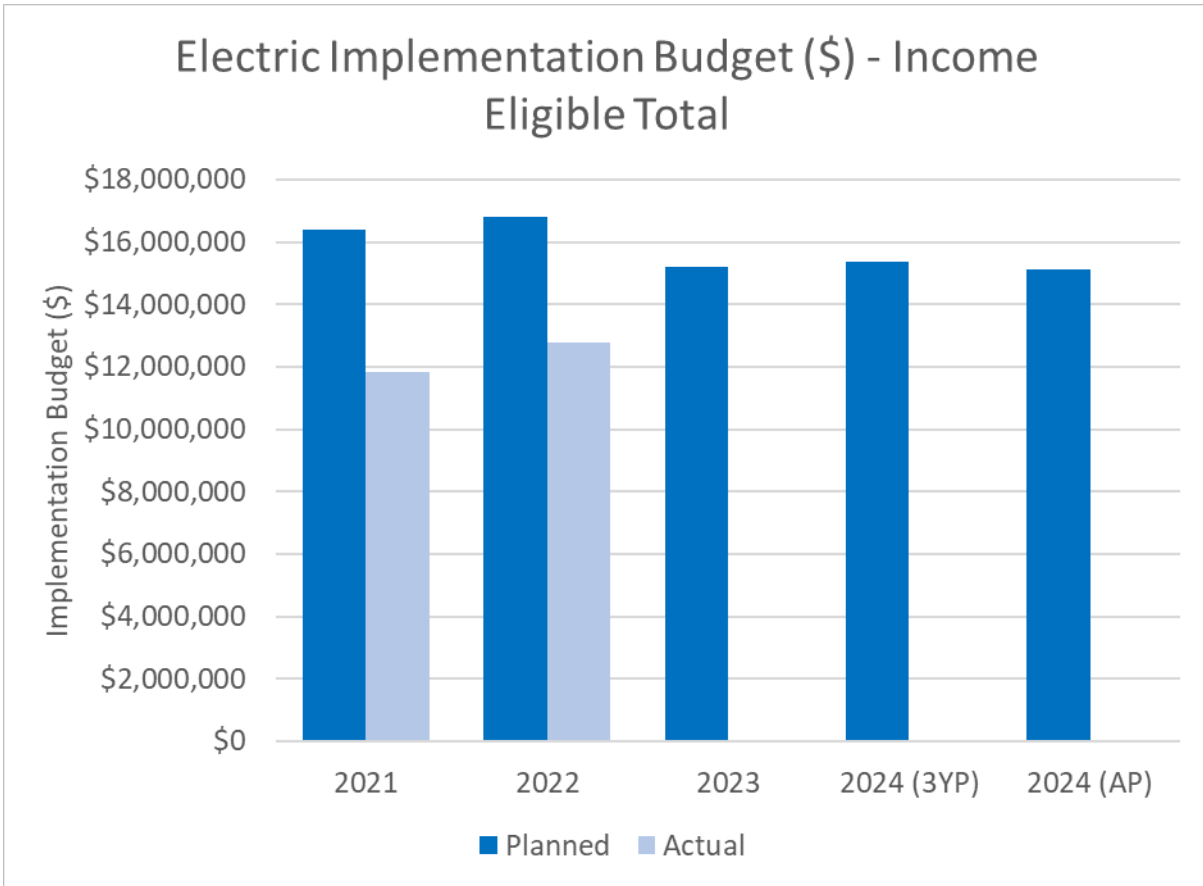
# Income Eligible Lifetime Savings







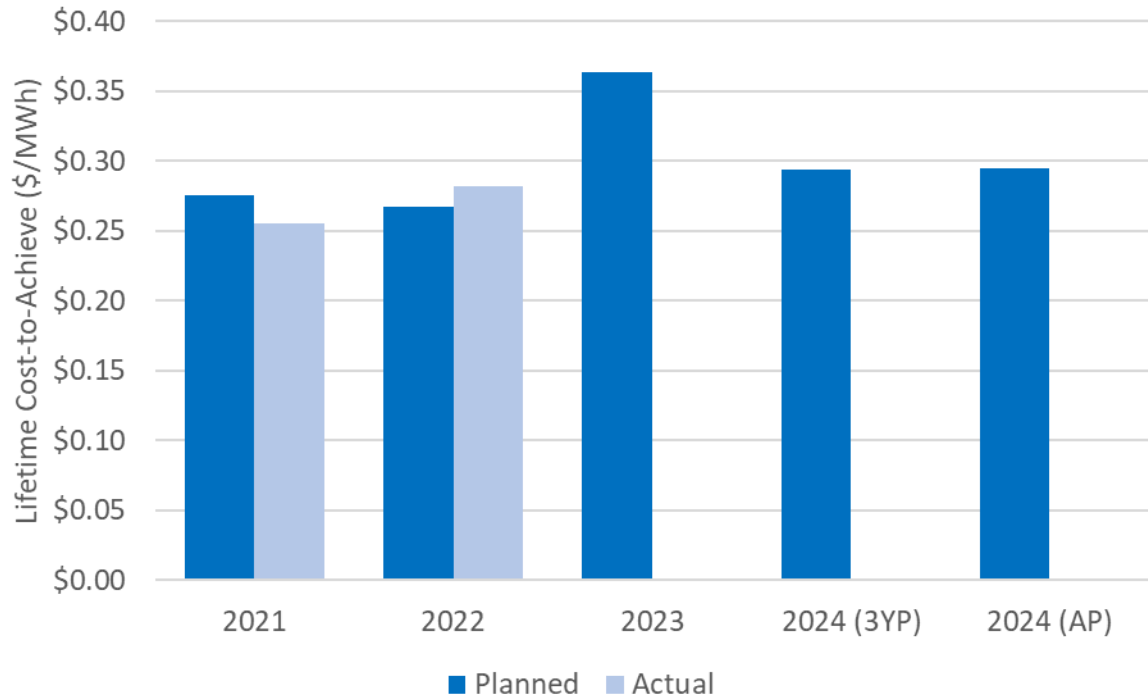
# Income Eligible Implementation Budget



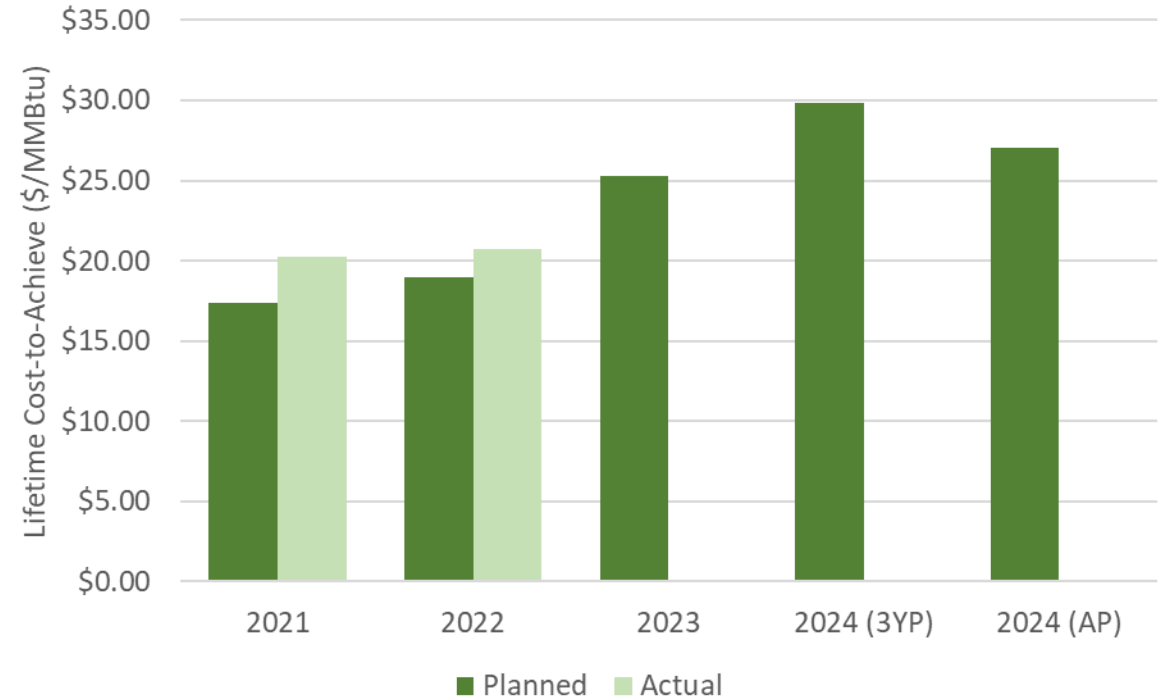


# Income Eligible Lifetime Cost-to-Achieve

Electric Cost to Achieve (\$/Lifetime kWh) - Income Eligible Total



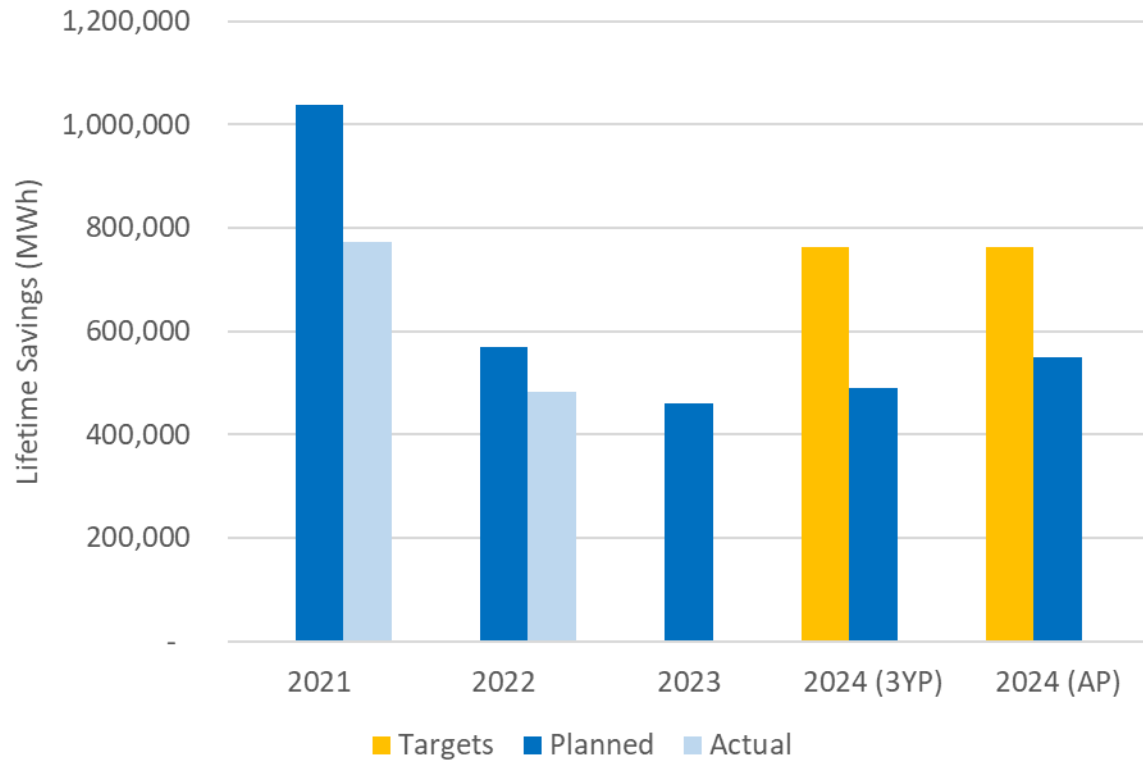
Gas Cost to Achieve (\$/Lifetime MMBtu) - Income Eligible Total



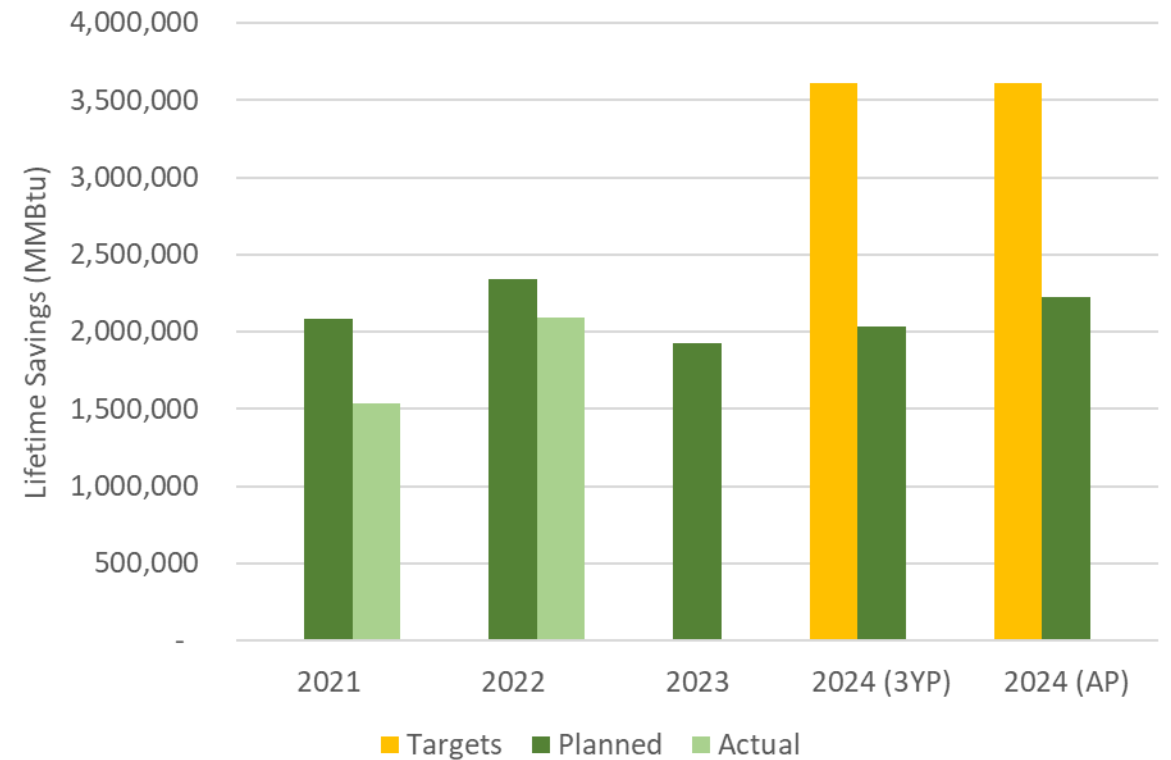


# C&I Lifetime Savings

### Electric Lifetime Savings (MWh) - C&I Total



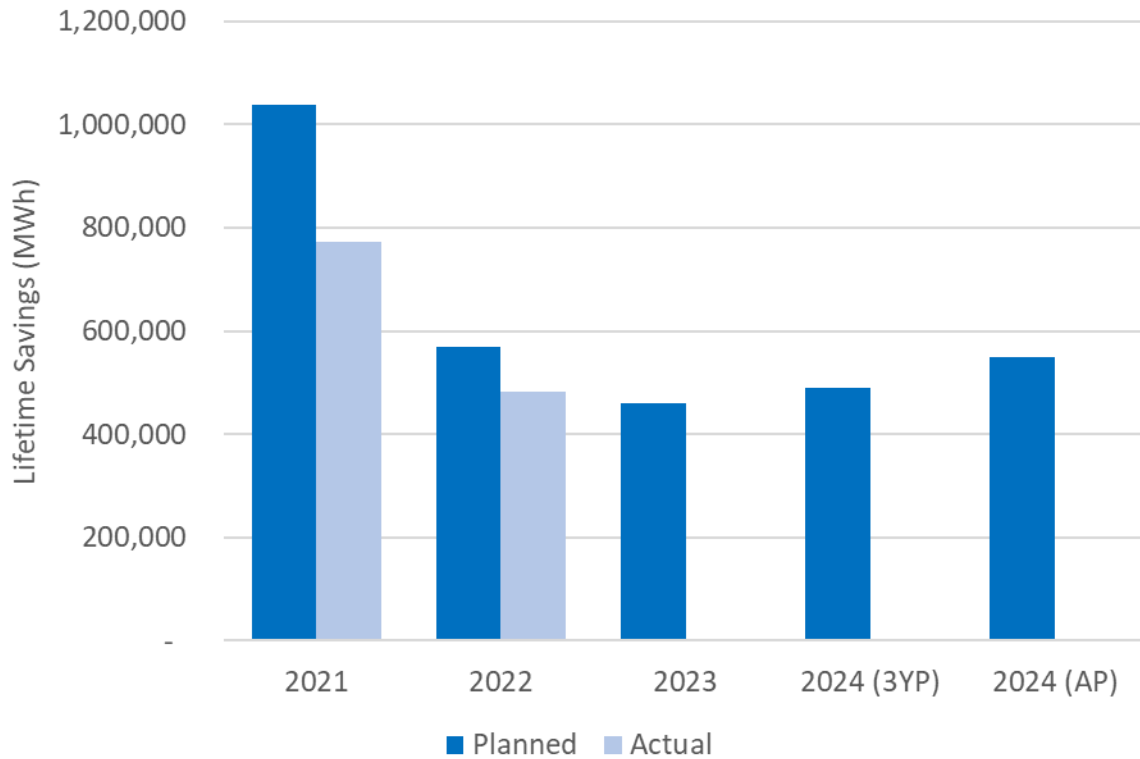
### Gas Lifetime Savings (MMBtu) - C&I Total



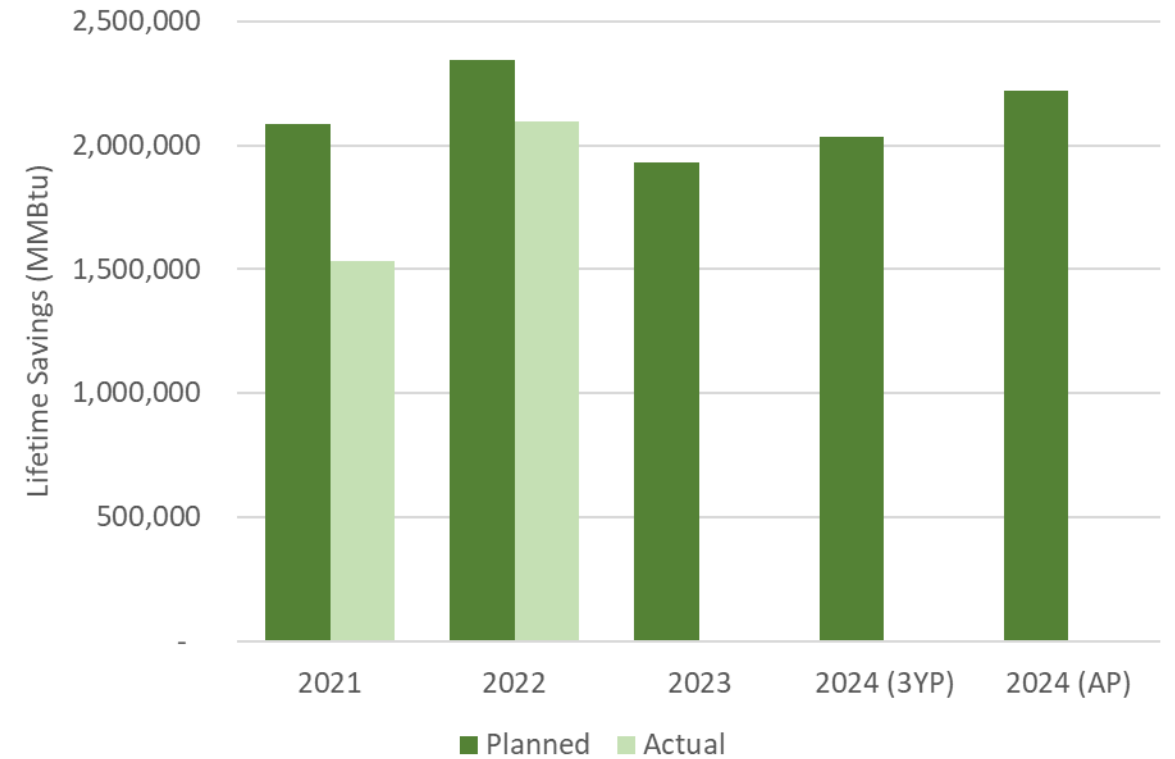


# C&I Lifetime Savings

### Electric Lifetime Savings (MWh) - C&I Total

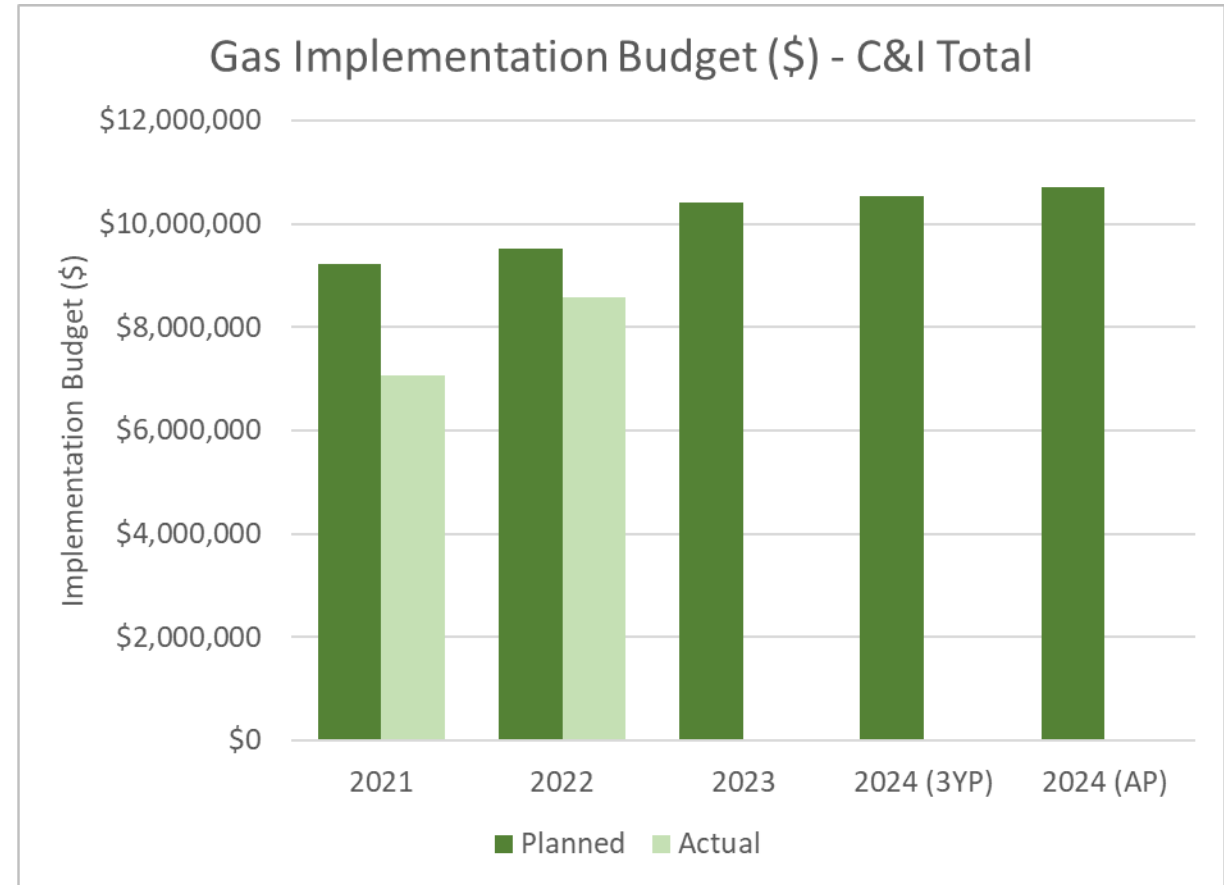
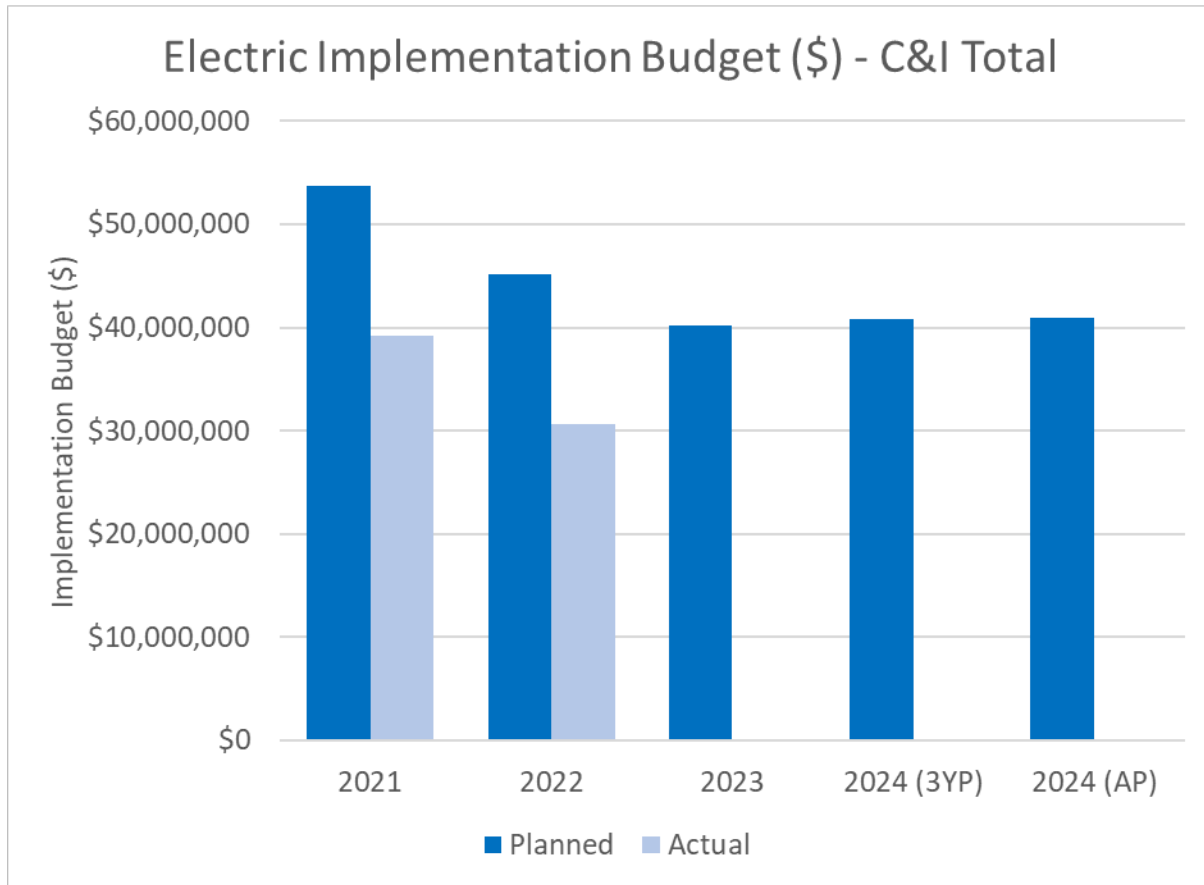


### Gas Lifetime Savings (MMBtu) - C&I Total





# C&I Implementation Budget





# C&I Lifetime Cost-to-Achieve

