



STATE OF RHODE ISLAND

**ENERGY EFFICIENCY &
RESOURCE MANAGEMENT COUNCIL**

CONSULTANT TEAM

Consultant Team Review Final Draft of the 2022 Annual Plan

Presented By: EERMC Consultant Team

Date: September 23, 2021



Outline

Introduction

Key Discussion Points from Sep. 16th Special EERMC Meeting

Conclusions and EERMC Vote Options



Introduction

Received Final Draft of the 2022 EE Annual Plan on September 8th

Council held special meeting to discuss in-depth on September 16th

Significant concerns were discussed in the context of an overarching lack of sufficient information to fully assess EE Plan (summary of main discussion points to follow)

Vote options summarized at end of presentation, with time for Council discussion & vote, after public comment, allotted in today's Agenda



KEY DISCUSSION POINTS FROM SEPTEMBER 16TH COUNCIL MEETING





Four Main Topics Discussed

Assessment of All Cost-Effective Savings

Rate and Bill Impacts Review Opportunity

Concerns with Large CHP Project

Equity Commitments



All Cost-Effective Savings: Planning Under Budgetary Constraint

EE Plans should comprehensively and transparently consider all available cost-effective savings prior to applying limiting factors of prudence and reliability

National Grid developed EE Plan 'top down' in order to not exceed perceived budget constraint of 5% increase from 2021

Originated from PUC requested compliance filing in 3-Year Plan docket

Prevailing conditions different today than during 3YP development process in 2020 – what would company have proposed, **today**, without the budget constraint?



All Cost-Effective Savings: What Savings Were Not Pursued?

Planning within a budget may not capture all available savings

Perceived budget constraint may impact proposed levels of program activity and savings

Critical to understand what is being “left on the table”. Need to see both:

1. Program activity that was included
2. Program activity that could have been included with higher budgets

Company did not provide sufficient information regarding item #2 above

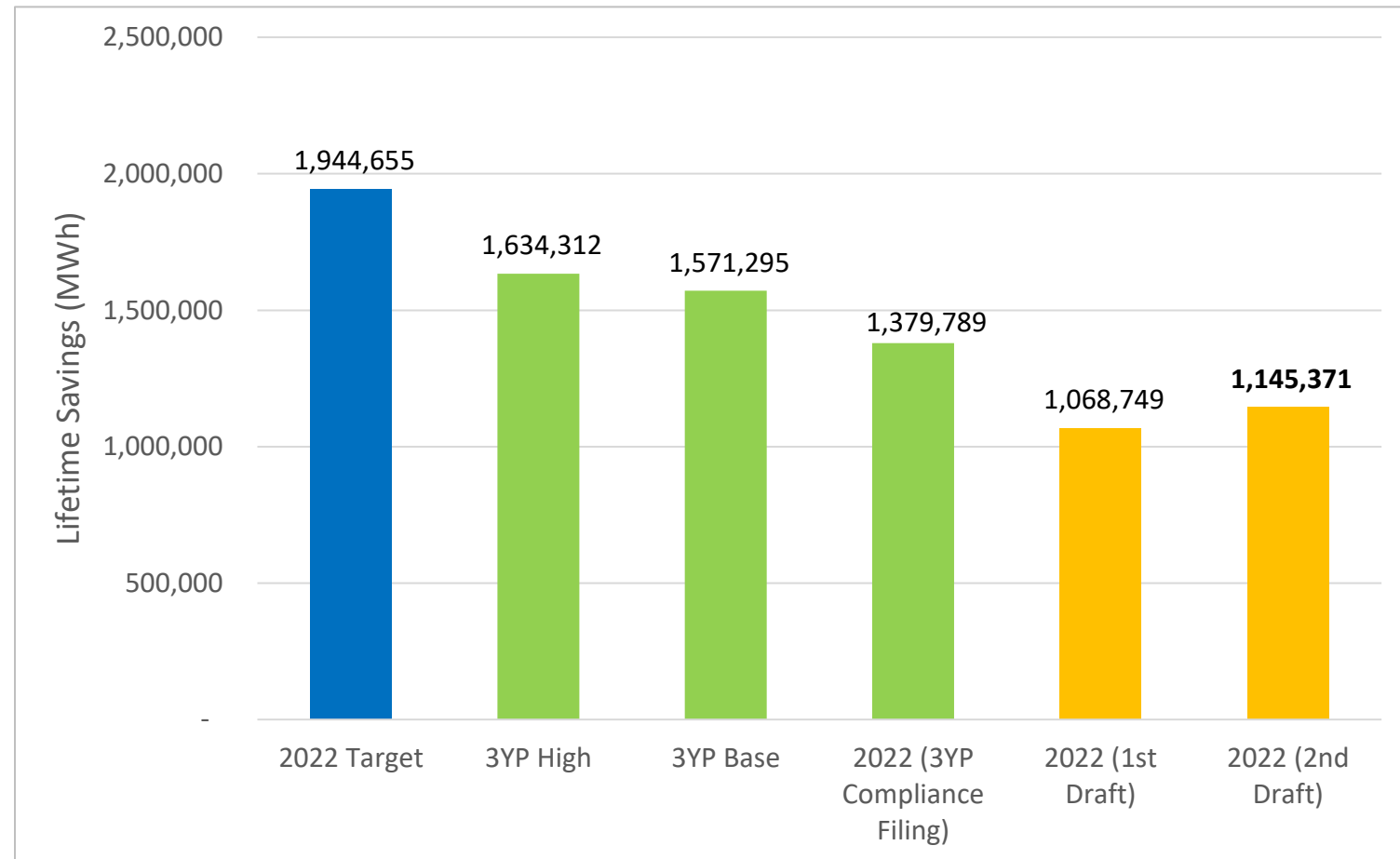
Precludes determination of whether all cost-effective savings were considered

Also difficult to assess whether portfolio mix is optimally cost-effective, prudent, reliable and environmentally responsible per LCP Standards



All Cost-Effective Savings: Electric Portfolio (Lifetime MWh, 2022)

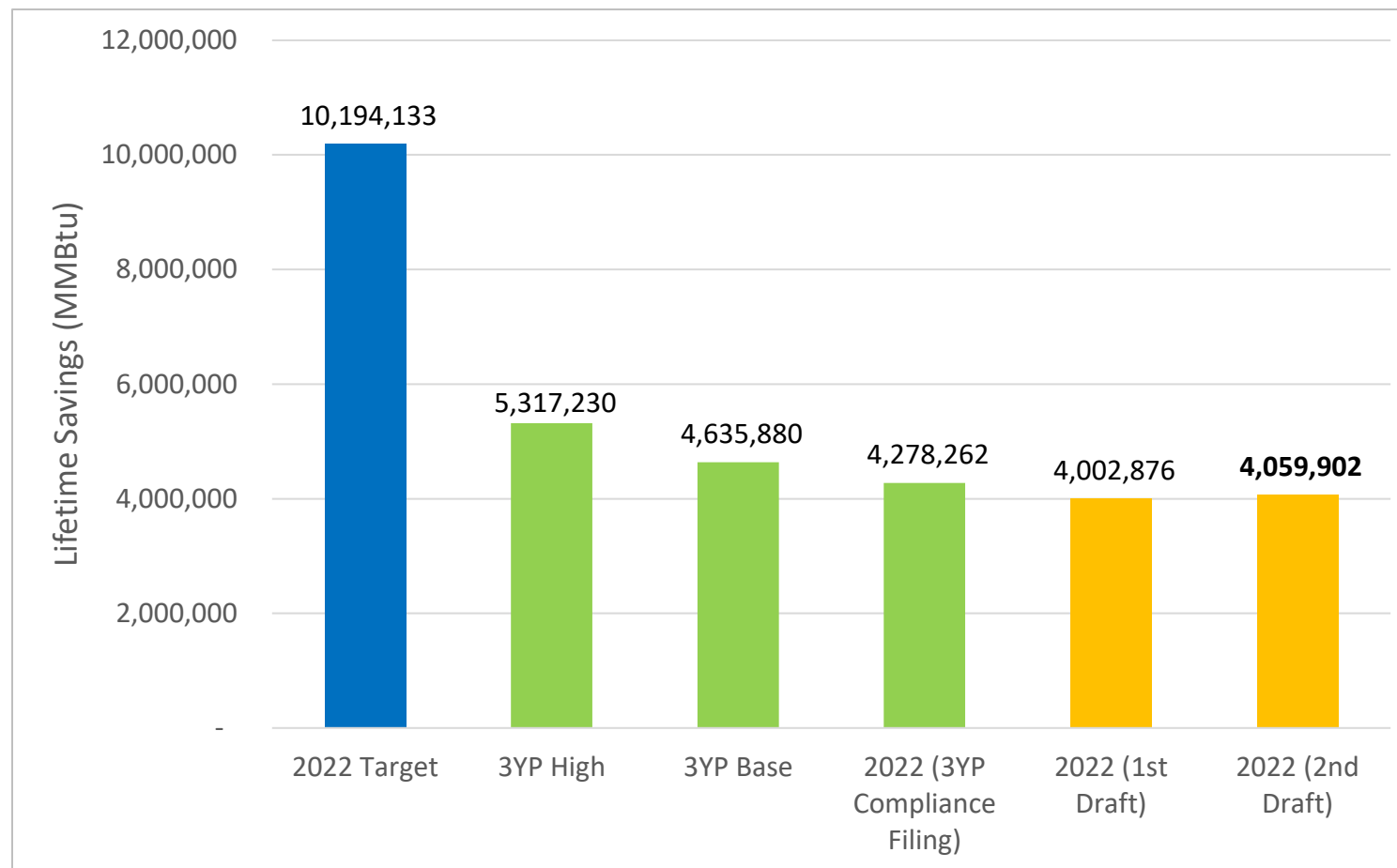
At the portfolio-level, lifetime Electric savings increased 76,622 MWh between the first and second draft of the 2022 Annual Plan, but still fall short of the 3YP 2022 “High” Scenario by 488,941 MWh.





All Cost-Effective Savings: Gas Portfolio (Lifetime MMBtu, 2022)

Lifetime Gas savings increased by 57,026 MMBtu at the portfolio-level between the first and second drafts of the EE Plan, while the 3YP 2022 “High” Scenario included 1,257,328 additional MMBtu.





Rate and Bill Impacts Review Opportunity

Significant issues regarding these analyses in recent planning cycles

Rate and bill impact models were not shared until just before the final draft EE Plan was made available for review

Several computational concerns have been raised after the final draft EE Plan was issued, which remain unresolved at this time

The Company has agreed to meet to discuss these concerns

The process and timing for sharing these has prevented the Council from viewing confirmed results from these analyses in their assessment of the EE Plan to date.



Concerns with Large CHP Project

\$10 Million project incentive crowds out investments that could serve an additional 500 C&I customers based on past average incentives per participant

The project benefit-cost ratio only exceeds 1.0 with the inclusion of economic multipliers but represents ~25% of C&I electric incentive

The Company has stated several times that they are developing a contingency plan for the event that this project is not supported by the Division or PUC, but the plan has not been made available to the Council



Equity Commitments

The Council has repeatedly expressed concerns regarding recent poor performance in the income-eligible and multifamily sectors' participation levels and savings achievement in recent years

The Company did not articulate equity commitments until the final draft EE Plan, at which point the Council and other stakeholders do not have an opportunity to suggest improvements, additions, or clarifications

The potential for the proposed commitments to lead to equitable outcomes has not been adequately justified (e.g. lack of information on eligibility verification process for proposed moderate income offering)

The Council requested specific reporting commitments as part of the expanded equity commitments anticipated in the final draft EE Plan, which were not included



CONCLUDING THOUGHTS & COUNCIL VOTE OPTIONS





Council's Responsibility

EERMC role and responsibility in potentially endorsing the Plan as described in the LCP Standards:

“

The Council shall vote whether to endorse the Annual EE Plan prior to the prescribed filing date. If the Council does not endorse the Annual EE Plan, the Council shall document its reasons and submit comments on the Annual EE Plan to the PUC for its consideration in final review of the Annual Plan.

”



Concluding Comments

Due to lack of transparent, comprehensive vetting of all cost-effective savings, and other information-sharing process concerns, **the C-Team can not verify that the proposed EE Plan was developed “in a manner that is optimally cost-effective, reliable, prudent, and environmentally responsible”** per the LCP Standards and Legislation.

Note: The Cost-Effectiveness Report is a separate Council legislated responsibility and will be addressed separately later on in this meeting.



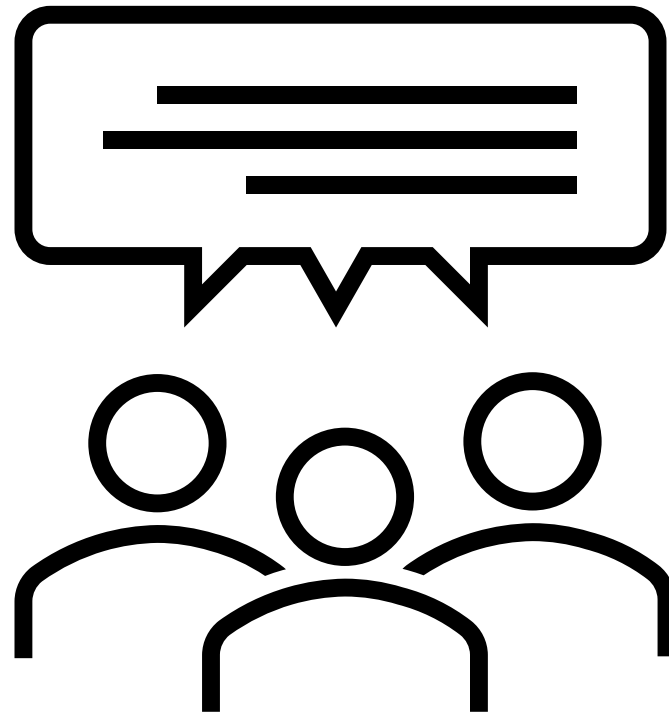
Summary of Vote Options

Per the EERMC's legal Counsel, the following options are available:

1. **Endorse the EE Plan**, as has been the case in all previous years. Endorsement may also list Council's concerns that didn't prevent endorsement but warrant mentioning.
2. **Endorse the EE Plan**, but decline to join any Settlement of the Parties. Represents a strong statement of the EERMC's concerns.
3. **Not endorse the EE Plan**, but indicate that if specific condition(s) are met it would be endorsed.
4. **Not endorse the EE Plan**, and provide a list of reasons why it was not endorsed for PUC consideration in its final review of the EE Plan.



Council Member Discussion



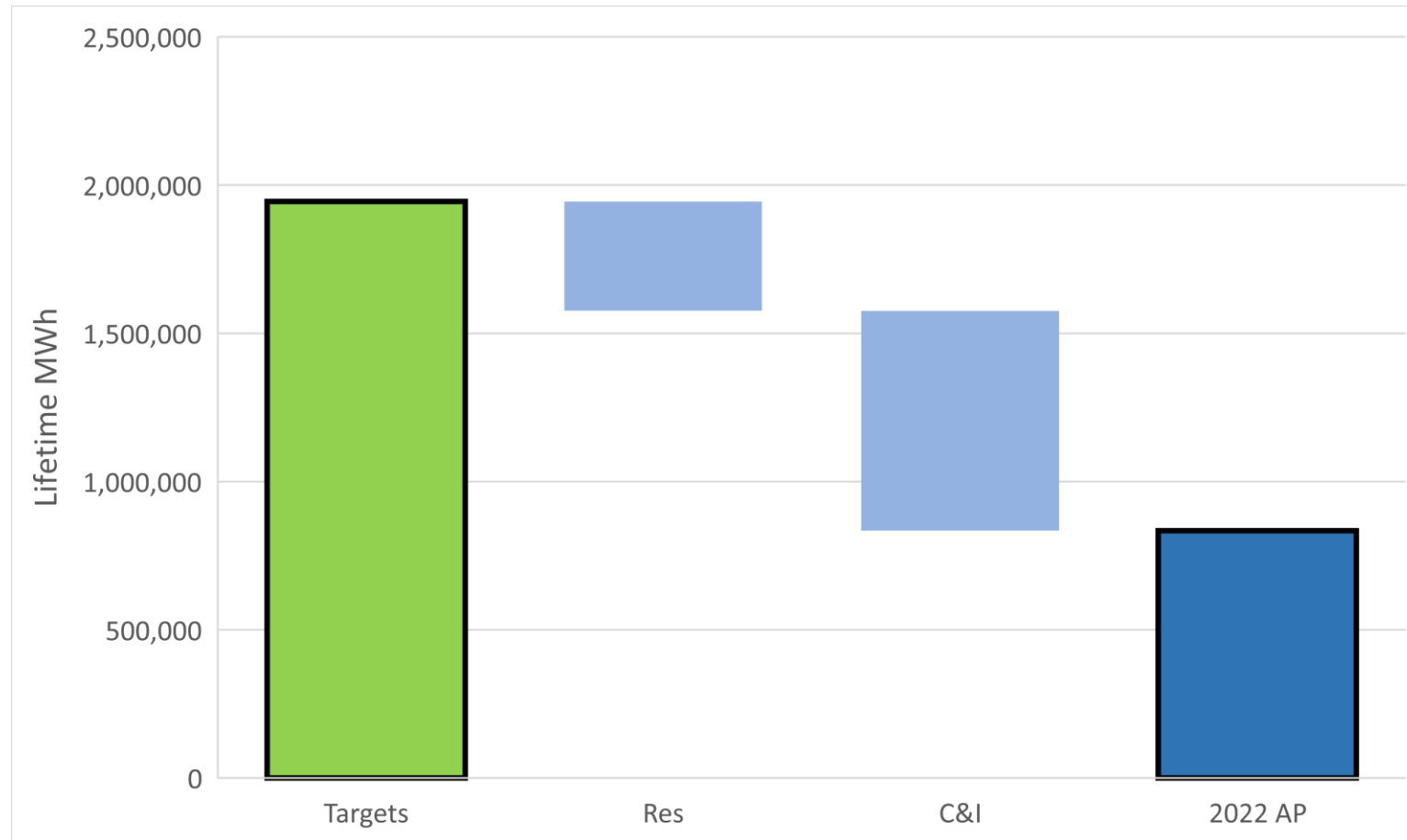


APPENDICES - 2022 PLAN SUMMARY DATA



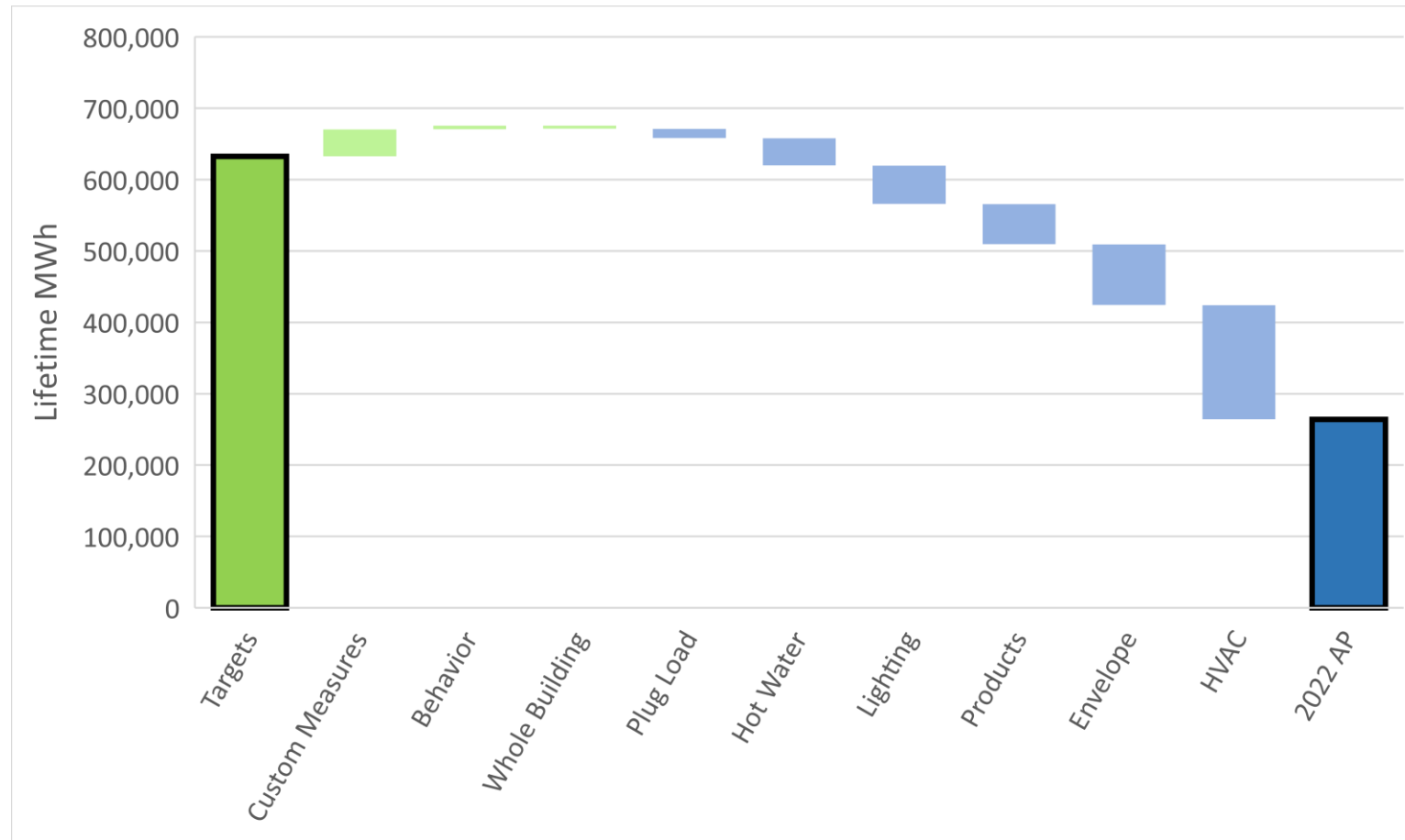


Waterfall Charts – Portfolio Lifetime MWh



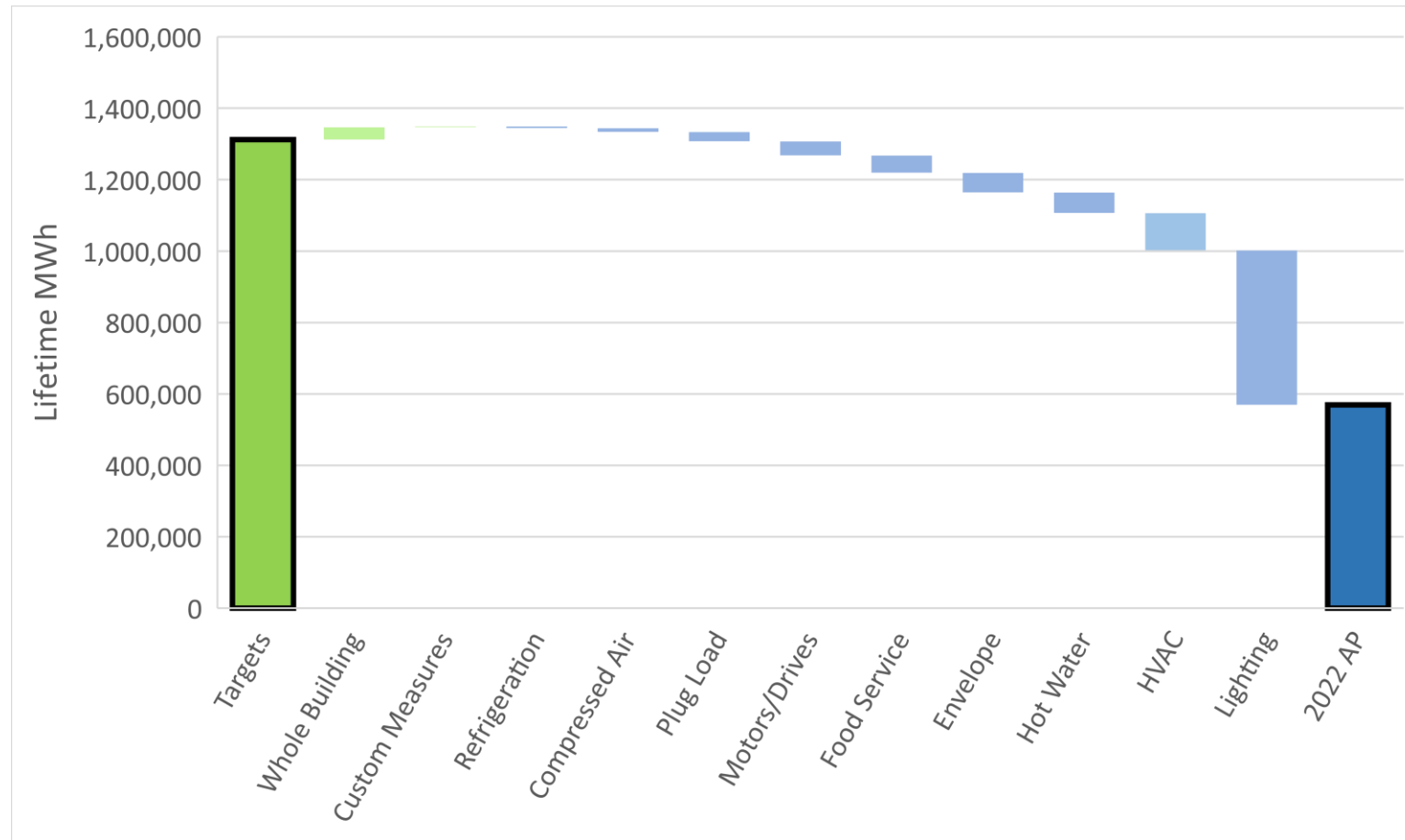


Waterfall Charts – Res/IES Lifetime MWh



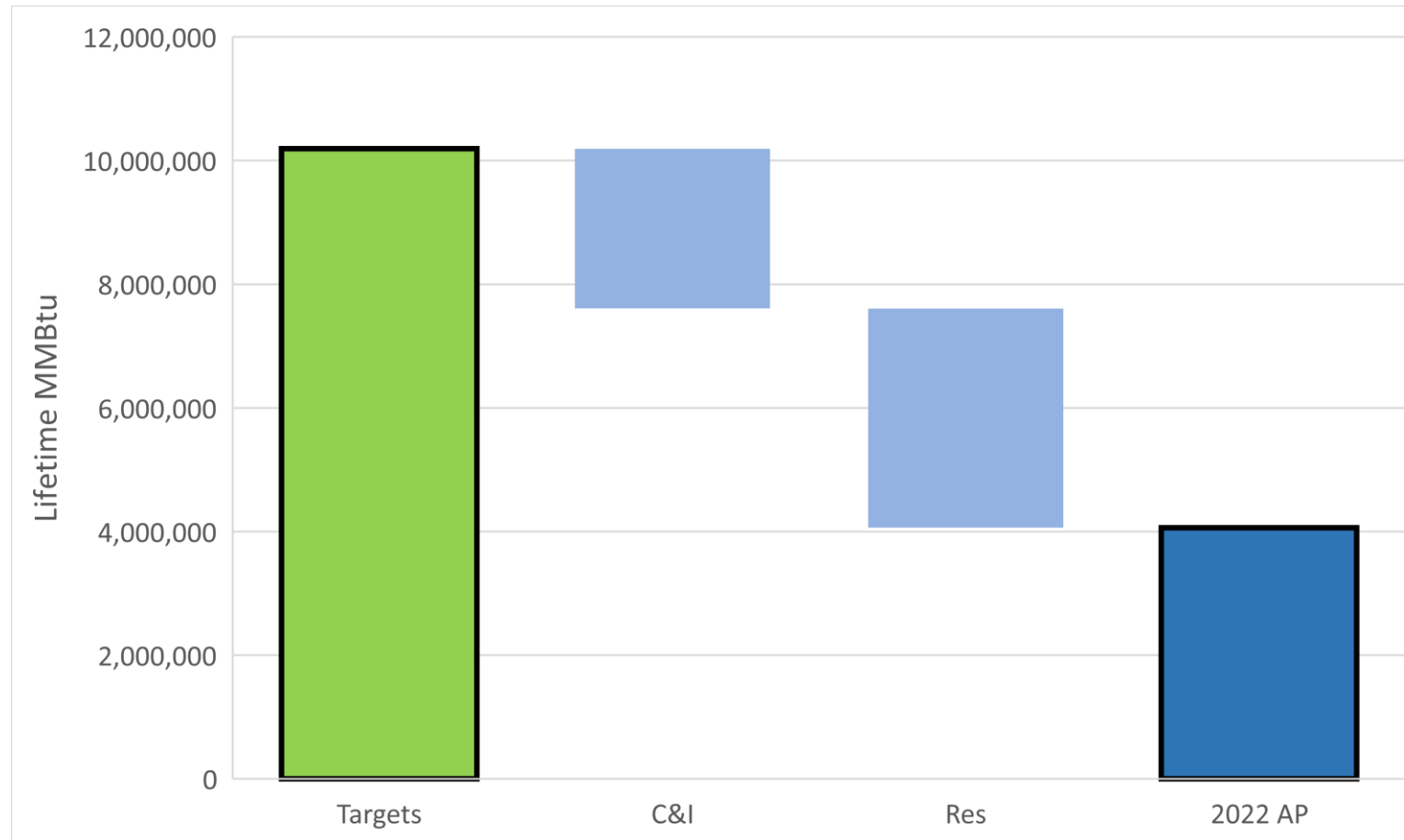


Waterfall Charts – C&I Lifetime MWh



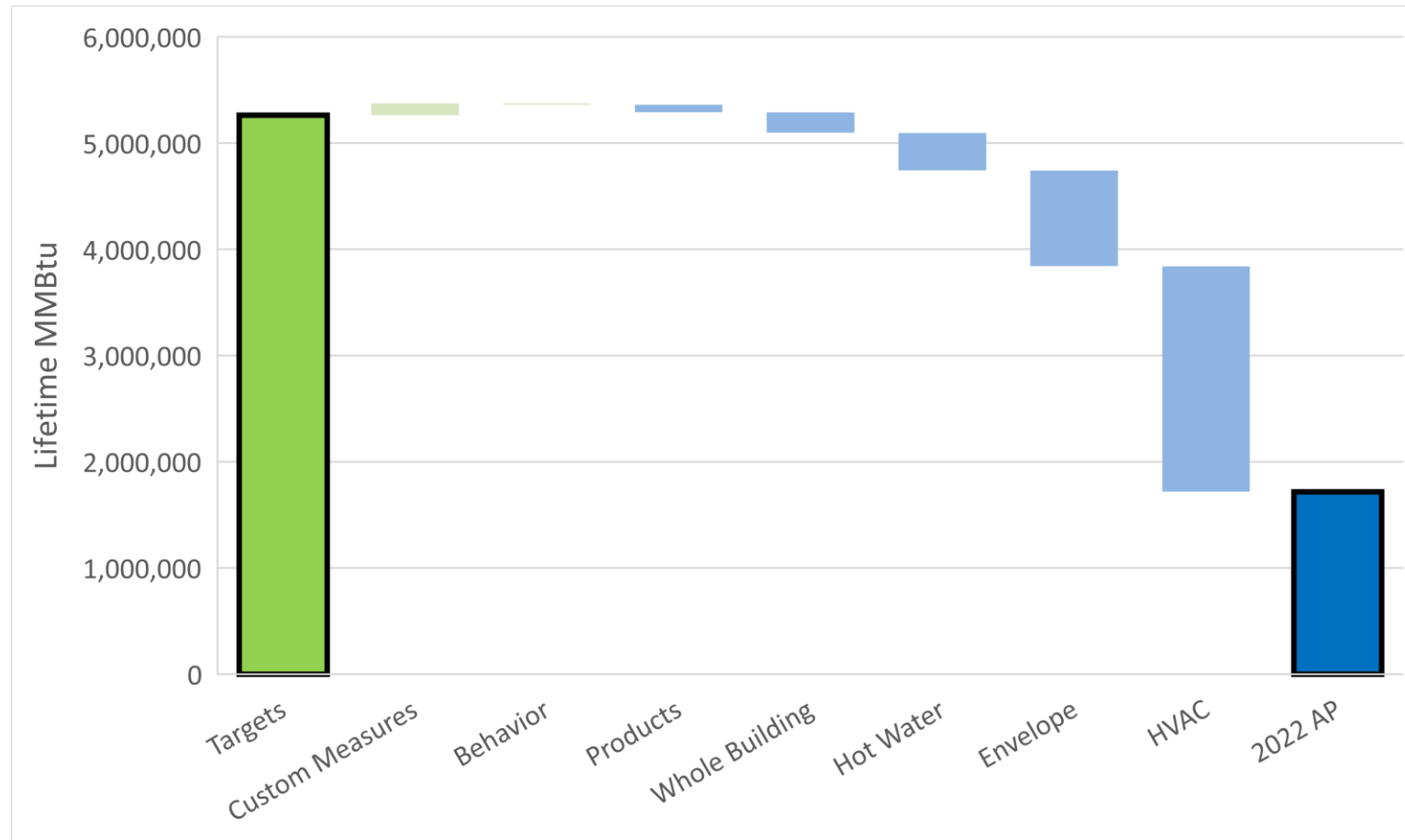


Waterfall Charts – Portfolio Lifetime MMBtu



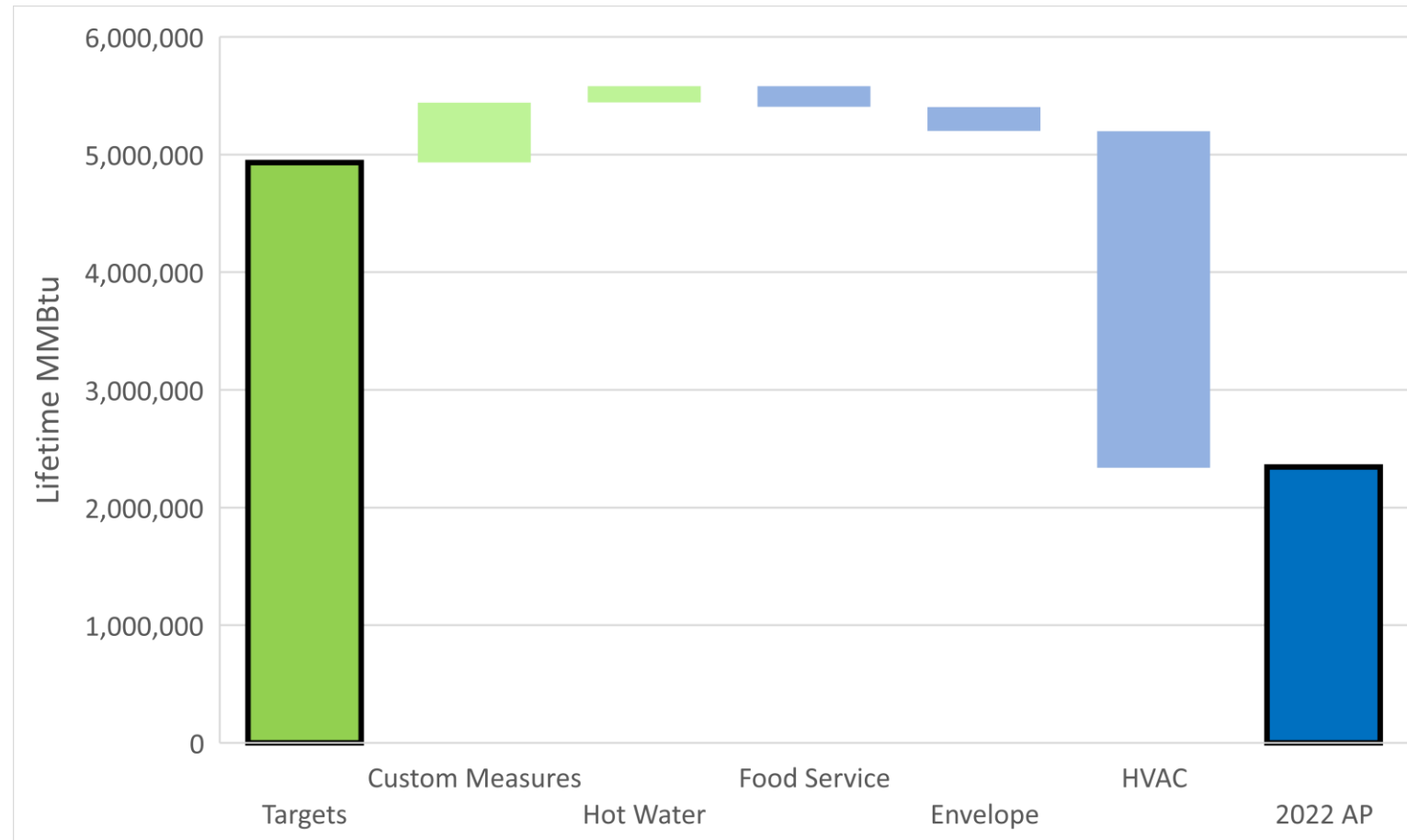


Waterfall Charts – Res/IES Lifetime MMBtu





Waterfall Charts – C&I Lifetime MMBtu





Electric Lifetime MWh

		LIFETIME MWhs				2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
% of 2022 Portfolio	Program	2022 (2nd Draft)							
6%	Small Business Direct Install	64,394		-40,740	-39%	3,075	5%		
44%	Large Commercial New Construction	503,905		342,833	213%	332,492	194%		
27%	Large Commercial Retrofit	312,931		-556,283	-64%	-276,009	-47%		
77%	C&I Total	881,230		-254,190	-22%	59,557	7%		
3%	Single Family - Income Eligible Services	38,506		-220	-1%	0	0%		
2%	Income Eligible Multifamily	24,309		1,946	9%	0	0%		
5%	Income Eligible Total	62,816		1,726	3%	0	0%		
1%	Residential New Construction	14,947		-3,070	-17%	-2,991	-17%		
7%	ENERGY STAR® HVAC	77,717		14,381	23%	12,920	20%		
1%	EnergyWise	13,472		105	1%	458	4%		
2%	EnergyWise Multifamily	20,783		-593	-3%	0	0%		
2%	Home Energy Reports	26,852		0	0%	0	0%		
0%	ENERGY STAR® Lighting	0		0		0			
4%	Residential Consumer Products	47,554		7,222	18%	6,677	16%		
18%	Residential Total	201,325		18,046	10%	17,065	9%		
100%	Portfolio Total	1,145,371		-234,418	-17%	76,622	7%		



Electric Annual MWh

		ANNUAL MWhs				2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
% of 2022 Portfolio	Program	2022 (2nd Draft)							
8%	Small Business Direct Install	9,976		280	3%	280	3%		
22%	Large Commercial New Construction	28,167		17,611	167%	16,399	139%		
32%	Large Commercial Retrofit	41,132		-21,714	-35%	-14,582	-26%		
62%	C&I Total	79,275		-3,823	-5%	2,096	3%		
3%	Single Family - Income Eligible Services	3,314		39	1%	0	0%		
1%	Income Eligible Multifamily	1,538		75	5%	0	0%		
4%	Income Eligible Total	4,851		114	2%	0	0%		
1%	Residential New Construction	867		-123	-12%	-123	-12%		
4%	ENERGY STAR® HVAC	4,620		706	18%	705	18%		
2%	EnergyWise	2,789		781	39%	26	1%		
1%	EnergyWise Multifamily	1,424		-21	-1%	0	0%		
21%	Home Energy Reports	26,852		0	0%	0	0%		
0%	ENERGY STAR® Lighting	0		0		0			
5%	Residential Consumer Products	6,885		625	10%	600	10%		
34%	Residential Total	43,435		1,968	5%	1,207	3%		
100%	Portfolio Total	127,561		-1,741	-1%	3,304	3%		



Electric Budget

IMPLEMENTATION BUDGET

% of 2022 Portfolio	Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
8%	Small Business Direct Install	\$8,969,374	\$612,416	7%	\$107,558	1%
16%	Large Commercial New Construction	\$18,386,830	\$10,637,395	137%	\$9,539,199	108%
21%	Large Commercial Retrofit	\$25,132,354	-\$13,331,233	-35%	-\$10,427,409	-29%
2%	C&I Financing	\$2,000,000	-\$3,000,000	-60%	-\$5,000,000	-71%
4%	RIIB	\$5,000,000	\$5,000,000		\$5,000,000	
0%	Community Based Initiatives - C&I	\$84,965	\$0	0%	\$0	0%
0%	Commercial Pilots	\$0	\$0		\$0	
4%	C&I ConnectedSolutions	\$4,385,962	\$837,341	24%	-\$52,292	-1%
0%	Commercial Workforce Development	\$171,500	\$171,500		\$0	0%
55%	C&I Total	\$64,130,985	\$927,419	1%	-\$832,943	-1%
11%	Single Family - Income Eligible Services	\$13,265,403	-\$450,818	-3%	\$16,405	0%
3%	Income Eligible Multifamily	\$3,535,824	-\$42,376	-1%	\$5,194	0%
0%	Income Eligible Workforce Development	\$0	\$0		\$0	
14%	Income Eligible Total	\$16,801,227	-\$493,194	-3%	\$21,599	0%
1%	Residential New Construction	\$1,541,541	\$52,963	4%	-\$88,806	-5%
4%	ENERGY STAR® HVAC	\$4,486,852	\$192,132	4%	\$260,266	6%
13%	EnergyWise	\$15,765,585	-\$1,098,713	-7%	-\$350,377	-2%
3%	EnergyWise Multifamily	\$3,270,679	-\$10,101	0%	-\$8,814	0%
2%	Home Energy Reports	\$2,641,297	\$17,199	1%	\$3,744	0%
0%	ENERGY STAR® Lighting	\$0	\$0		\$0	
2%	Residential Consumer Products	\$2,837,143	-\$22,073	-1%	-\$27,093	-1%
0%	Energy Efficiency Education	\$40,000	\$0	0%	\$0	0%
0%	Comprehensive Marketing - Residential	\$357,943	\$8,987	3%	\$1,142	0%
0%	Community Based Initiatives - Residential	\$255,074	-\$2,390	-1%	\$178	0%
2%	Residential ConnectedSolutions	\$1,802,218	-\$648,939	-26%	-\$195	0%
0%	Residential Pilots	\$0	\$0		\$0	
0%	Residential Workforce Development	\$0	\$0		\$0	
28%	Residential Total	\$32,998,332	-\$1,510,935	-4%	-\$209,954	-1%
1%	EERMC	\$1,274,366	\$215,389	20%	\$214,061	20%
2%	OER	\$1,911,549	\$852,572	81%	\$851,244	80%
3%	Regulatory Total	\$3,185,916	\$1,067,961	50%	\$1,065,305	50%
100%	Portfolio Total	\$117,116,460	-\$8,749	0%	\$44,007	0%



Electric Lifetime Cost to Achieve (\$/kWh)

\$/LIFETIME kWh

Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
		\$/kWh	%	\$/kWh	%
Small Business Direct Install	\$0.14	\$0.06	75%	-\$0.01	-4%
Large Commercial New Construction	\$0.04	-\$0.01	-24%	-\$0.02	-29%
Large Commercial Retrofit	\$0.08	\$0.04	81%	\$0.02	33%
C&I Total	\$0.07	\$0.02	31%	-\$0.01	-8%
Single Family - Income Eligible Services	\$0.34	-\$0.01	-3%	\$0.00	0%
Income Eligible Multifamily	\$0.15	-\$0.01	-9%	\$0.00	0%
Income Eligible Total	\$0.27	-\$0.02	-6%	\$0.00	0%
Residential New Construction	\$0.10	\$0.02	25%	\$0.01	13%
ENERGY STAR® HVAC	\$0.06	-\$0.01	-15%	-\$0.01	-11%
EnergyWise	\$1.17	-\$0.09	-7%	-\$0.07	-6%
EnergyWise Multifamily	\$0.16	\$0.00	3%	\$0.00	0%
Home Energy Reports	\$0.10	\$0.00	1%	\$0.00	0%
ENERGY STAR® Lighting	N/A				
Residential Consumer Products	\$0.06	-\$0.01	-16%	-\$0.01	-15%
Residential Total	\$0.16	-\$0.02	-13%	-\$0.02	-9%
Portfolio Total	\$0.10	\$0.02	20%	-\$0.01	-7%



Electric Annual Cost to Achieve (\$/kWh)

\$/ANNUAL kWh

Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
Small Business Direct Install	\$0.90	\$0.04	4%	-\$0.01	-2%
Large Commercial New Construction	\$0.65	-\$0.08	-11%	-\$0.10	-13%
Large Commercial Retrofit	\$0.61	\$0.00	0%	-\$0.03	-4%
C&I Total	\$0.81	\$0.05	6%	-\$0.03	-4%
Single Family - Income Eligible Services	\$4.00	-\$0.19	-4%	\$0.00	0%
Income Eligible Multifamily	\$2.30	-\$0.15	-6%	\$0.00	0%
Income Eligible Total	\$3.46	-\$0.19	-5%	\$0.00	0%
Residential New Construction	\$1.78	\$0.27	18%	\$0.13	8%
ENERGY STAR® HVAC	\$0.97	-\$0.13	-11%	-\$0.11	-10%
EnergyWise	\$5.65	-\$2.75	-33%	-\$0.18	-3%
EnergyWise Multifamily	\$2.30	\$0.03	1%	-\$0.01	0%
Home Energy Reports	\$0.10	\$0.00	1%	\$0.00	0%
ENERGY STAR® Lighting	N/A				
Residential Consumer Products	\$0.41	-\$0.04	-10%	-\$0.04	-10%
Residential Total	\$0.76	-\$0.07	-9%	-\$0.03	-3%
Portfolio Total	\$0.92	\$0.01	1%	-\$0.02	-3%



Gas Lifetime MMBtu

LIFETIME MMBtus

% of 2022 Portfolio	Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
			MMBtus	%	MMBtus	%
19%	Large Commercial New Construction	788,763	328,096	71%	-42,330	-5%
33%	Large Commercial Retrofit	1,332,508	-226,877	-15%	122,209	10%
2%	Small Business Direct Install	91,700	53,403	139%	53,403	139%
3%	Commercial & Industrial Multifamily	131,220	-10,649	-8%	0	0%
58%	C&I Total	2,344,192	143,973	7%	133,282	6%
5%	Single Family - Income Eligible Services	218,847	3,666	2%	0	0%
7%	Income Eligible Multifamily	273,085	-42,460	-13%	-33,698	-11%
12%	Income Eligible Total	491,932	-38,795	-7%	-33,698	-6%
11%	Energy Star® HVAC	439,717	-289,935	-40%	-30,439	-6%
12%	EnergyWise	478,550	-16,502	-3%	0	0%
4%	EnergyWise Multifamily	147,064	-1,929	-1%	0	0%
2%	Home Energy Reports	93,548	0	0%	0	0%
2%	Residential New Construction	64,899	-15,173	-19%	-12,119	-16%
30%	Residential Total	1,223,778	-323,539	-21%	-42,558	-3%
100%	Portfolio Total	4,059,902	-218,360	-5%	57,026	1%



Gas Annual MMBtu

ANNUAL MMBtus

% of 2022 Portfolio	Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
			MMBtus	%	MMBtus	%
14%	Large Commercial New Construction	52,956	23,961	83%	-1,112	-2%
37%	Large Commercial Retrofit	142,888	-47,189	-25%	4,481	3%
2%	Small Business Direct Install	6,113	2,284	60%	2,284	60%
2%	Commercial & Industrial Multifamily	8,803	-641	-7%	0	0%
54%	C&I Total	210,760	-21,584	-9%	5,653	3%
3%	Single Family - Income Eligible Services	10,942	183	2%	0	0%
4%	Income Eligible Multifamily	14,700	301	2%	1,047	8%
7%	Income Eligible Total	25,642	484	2%	1,047	4%
7%	Energy Star® HVAC	26,740	-15,103	-36%	-1,931	-7%
5%	EnergyWise	20,850	-826	-4%	0	0%
2%	EnergyWise Multifamily	8,279	-396	-5%	0	0%
24%	Home Energy Reports	93,548	0	0%	0	0%
1%	Residential New Construction	3,610	-648	-15%	-502	-12%
39%	Residential Total	153,027	-16,974	-10%	-2,433	-2%
100%	Portfolio Total	389,430	-38,074	-9%	4,267	1%



Gas Budget

IMPLEMENTATION BUDGET

% of 2022 Portfolio	Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
9%	Large Commercial New Construction	\$3,186,585	\$450,431	16%	-\$40,420	-1%
13%	Large Commercial Retrofit	\$4,696,304	-\$454,604	-9%	\$11,235	0%
1%	Small Business Direct Install	\$355,885	-\$23,455	-6%	-\$3,576	-1%
3%	Commercial & Industrial Multifamily	\$957,264	-\$74,808	-7%	-\$6,649	-1%
0%	Comprehensive Marketing - Commercial and Industrial	\$0	\$0		\$0	
1%	Commercial Pilots	\$215,780	-\$3,240	-1%	-\$3,240	-1%
0%	Finance Costs	\$0	\$0		\$0	
0%	Community Based Initiatives - C&I	\$28,322	\$0	0%	\$0	0%
0%	RIB		\$0		\$0	
0%	Commercial Workforce Development	\$67,500	\$67,500		-\$6,000	-8%
27%	C&I Total	\$9,507,639	-\$38,176	0%	-\$48,650	-1%
18%	Single Family - Income Eligible Services	\$6,371,765	-\$5,124	0%	\$4,638	0%
8%	Income Eligible Multifamily	\$2,948,945	-\$32,160	-1%	\$129	0%
0%	Income Eligible Workforce Development	\$0	\$0		\$0	
27%	Income Eligible Total	\$9,320,710	-\$37,284	0%	\$4,767	0%
11%	Energy Star® HVAC	\$3,732,464	-\$208,250	-5%	-\$242,755	-6%
25%	EnergyWise	\$8,645,930	-\$115,849	-1%	\$3,587	0%
4%	EnergyWise Multifamily	\$1,489,154	-\$2,210	0%	-\$12,836	-1%
1%	Home Energy Reports	\$441,828	\$538	0%	-\$126	0%
1%	Residential New Construction	\$513,162	-\$97,914	-16%	-\$79,488	-13%
0%	Comprehensive Marketing - Residential	\$68,032	\$274	0%	\$481	1%
0%	Residential Pilots	\$0	\$0		\$0	
0%	Community Based Initiatives - Residential	\$84,965	-\$1,308	-2%	\$0	0%
0%	Residential Workforce Development	\$0	\$0		\$0	
43%	Residential Total	\$14,975,536	-\$424,719	-3%	-\$331,137	-2%
1%	EERMC	\$487,792	\$128,102	36%	\$66,677	16%
2%	OER	\$731,687	\$371,998	103%	\$310,572	74%
3%	Regulatory Total	\$1,219,479	\$500,100	70%	\$377,249	45%
100%	Portfolio Total	\$35,023,364	-\$79	0%	\$2,230	0%



Gas Lifetime Cost to Achieve (\$/MMBtu)

\$/LIFETIME MMBtu

Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
Large Commercial New Construction	\$4.04	-\$1.90	-32%	\$0.16	4%
Large Commercial Retrofit	\$3.52	\$0.22	7%	-\$0.35	-9%
Small Business Direct Install	\$3.88	-\$6.02	-61%	-\$5.51	-59%
Commercial & Industrial Multifamily	\$7.30	\$0.02	0%	-\$0.05	-1%
C&I Total	\$4.06	-\$0.28	-7%	-\$0.27	-6%
Single Family - Income Eligible Services	\$29.12	-\$0.52	-2%	\$0.02	0%
Income Eligible Multifamily	\$10.80	\$1.35	14%	\$1.19	12%
Income Eligible Total	\$18.95	\$1.31	7%	\$1.22	7%
Energy Star® HVAC	\$8.49	\$3.09	57%	\$0.03	0%
EnergyWise	\$18.07	\$0.37	2%	\$0.01	0%
EnergyWise Multifamily	\$10.13	\$0.12	1%	-\$0.09	-1%
Home Energy Reports	\$4.72	\$0.01	0%	\$0.00	0%
Residential New Construction	\$7.91	\$0.28	4%	\$0.21	3%
Residential Total	\$12.24	\$2.28	23%	\$0.15	1%
Portfolio Total	\$8.63	\$0.44	5%	-\$0.12	-1%



Gas Annual Cost to Achieve (\$/MMBtu)

\$/ANNUAL MMBtu

Program	2022 (2nd Draft)	2022 (2nd Draft) Compared to 2022 Plan (PUC Compliance Filing)		2022 (2nd Draft) Compared to 2022 (1st Draft)	
Large Commercial New Construction	\$60.17	-\$34.19	-36%	\$0.49	1%
Large Commercial Retrofit	\$32.87	\$5.77	21%	-\$0.98	-3%
Small Business Direct Install	\$58.21	-\$40.84	-41%	-\$35.65	-38%
Commercial & Industrial Multifamily	\$108.74	-\$0.54	0%	-\$0.76	-1%
C&I Total	\$45.11	\$4.03	10%	-\$1.48	-3%
Single Family - Income Eligible Services	\$582.30	-\$10.40	-2%	\$0.42	0%
Income Eligible Multifamily	\$200.61	-\$6.43	-3%	-\$15.37	-7%
Income Eligible Total	\$363.49	-\$8.48	-2%	-\$15.27	-4%
Energy Star® HVAC	\$139.58	\$45.40	48%	\$0.93	1%
EnergyWise	\$414.68	\$10.45	3%	\$0.17	0%
EnergyWise Multifamily	\$179.87	\$7.97	5%	-\$1.55	-1%
Home Energy Reports	\$4.72	\$0.01	0%	\$0.00	0%
Residential New Construction	\$142.16	-\$1.35	-1%	-\$1.99	-1%
Residential Total	\$97.86	\$7.27	8%	-\$0.60	-1%
Portfolio Total	\$89.94	\$8.01	10%	-\$0.99	-1%