



STATE OF RHODE ISLAND

# ENERGY EFFICIENCY & RESOURCE MANAGEMENT COUNCIL

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## 2021 Energy Efficiency Plan EERMC Consultant Team Review

**EERMC Council Meeting October 8, 2020**





# Outline

Overview & Key Findings

Electric Trends & Comparisons

Gas Trends & Comparisons

Sector Highlights

Summary and Recommendations





# Overview & Key Findings

Significant COVID-19 Impacts on process, strategies & final content:

Starting in Q2, many traditional Stakeholder, Utility, Regulatory and Council timelines, deliverables and operating conditions were affected

LCP Standards release in Q2 provided option to submit combined Annual & 3Y Plan filing

Resulted in changes to established timelines and processes set at start of year

Main impact on the portfolio was decision to hold system benefit charge (SBC) at 2020 level

Shifted focus to maximizing savings within available budget; cost-efficiency and addressing barriers were set as key objectives in light of budget ceiling



# Overview & Key Findings

The Plan comprehensively documents alignment with all LCP Standards

The overall structure and content reflects improvement from historical submittals

Significant areas requiring negotiations with Grid and key stakeholders resulted in positive outcomes, i.e.

- Adjustments to the Performance Incentive structure, including an Equity focus
- Improvements in the documentation of “barrier” mitigation, esp. workforce
- Inclusion of multi-year strategies for CHP and RIIB

The final version requires “fixes” – tables incomplete, typos, inconsistent alignment of some values, and other potential issues pending closer review

As a general observation, significant enhancements for the process of Plan development and review by the EERMC, OER, the Division and other stakeholders should be established in the future

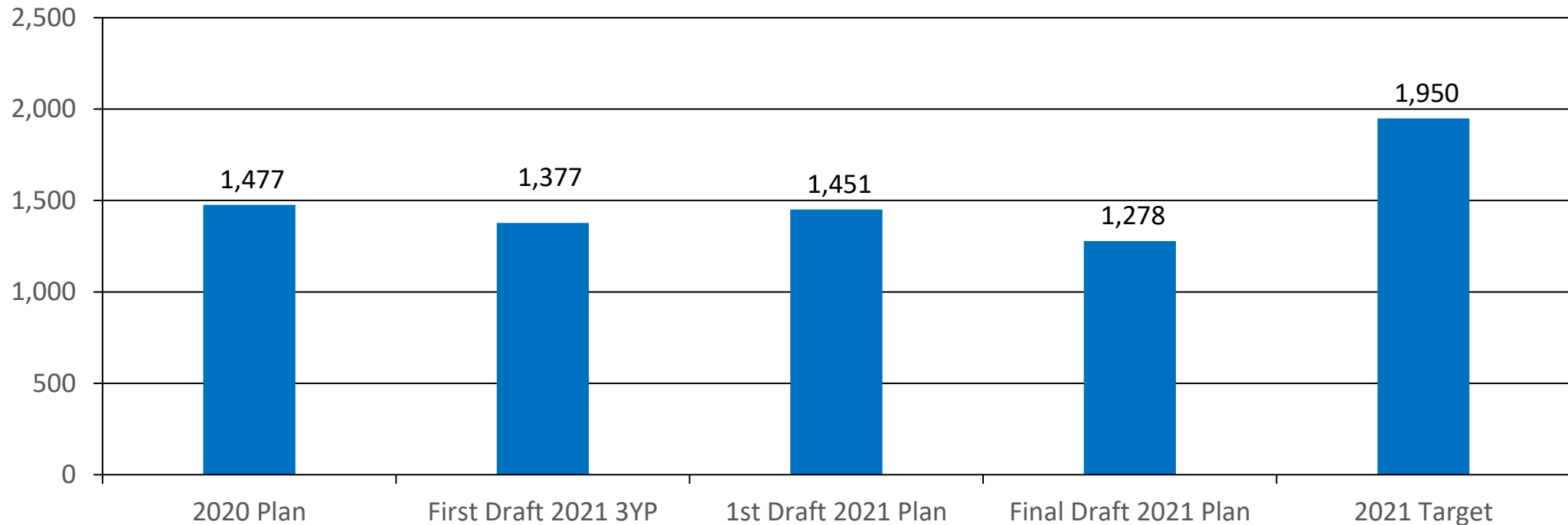


# ELECTRIC TRENDS & COMPARISONS





# Electric Portfolio Lifetime Savings (GWh)



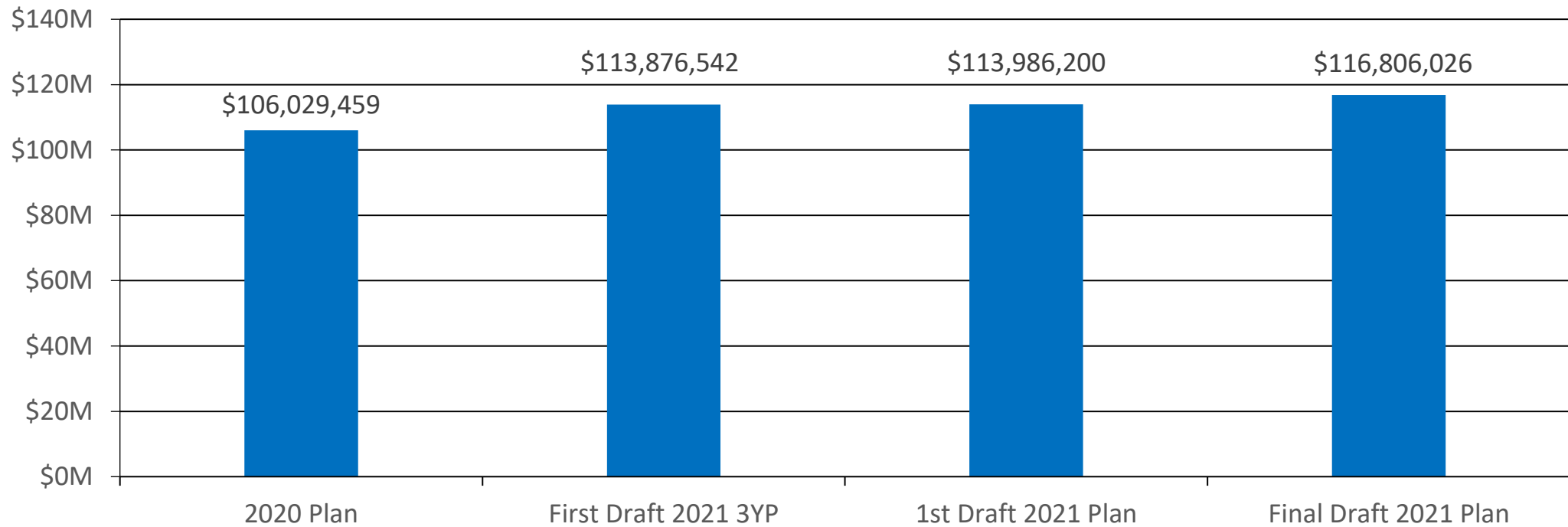
## Key Points

Increases in planned savings driven by stakeholder discussions offset by reduced claimable savings due to EM&V

Combined Heat and Power not covered in these slides (included in Appendix)



# Electric Implementation Budget (\$MM)



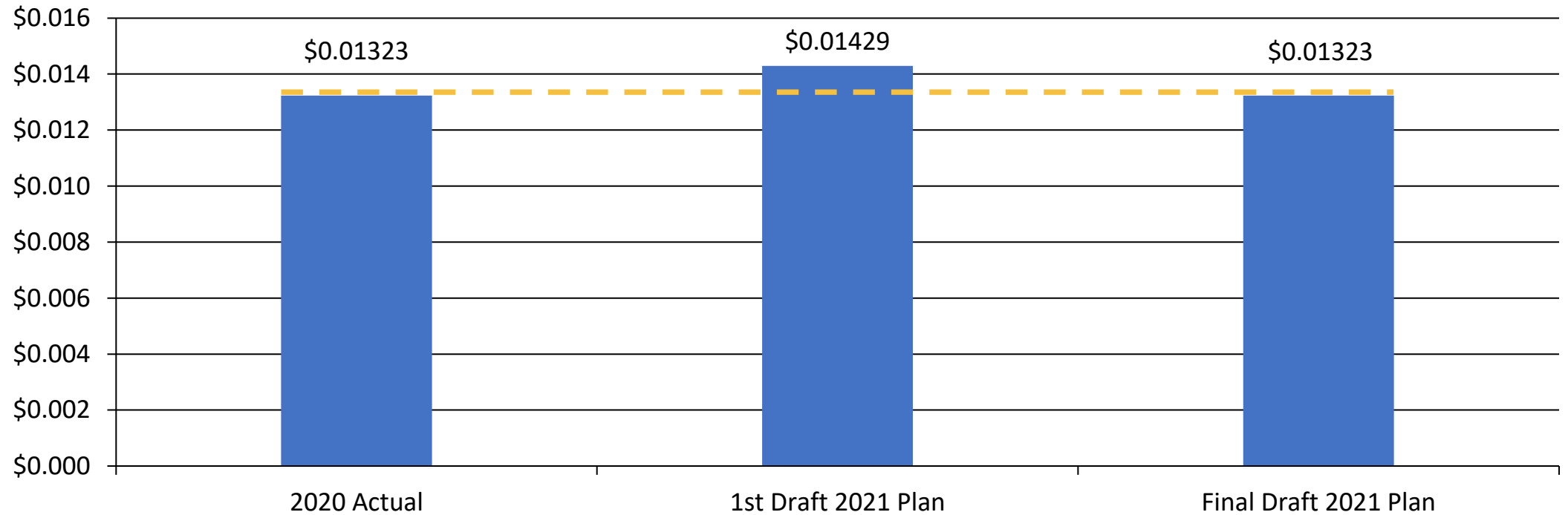
## Key Points

Implementation budget above 1<sup>st</sup> draft 3YP and 1<sup>st</sup> draft 2021 Plan

Fund balance to be finalized in December 2020



# Electric System Benefit Charge (\$/kWh)



## Key Points

**SBC ceiling set at 2020 levels** due to immediate-term concerns about COVID-19 economic impacts



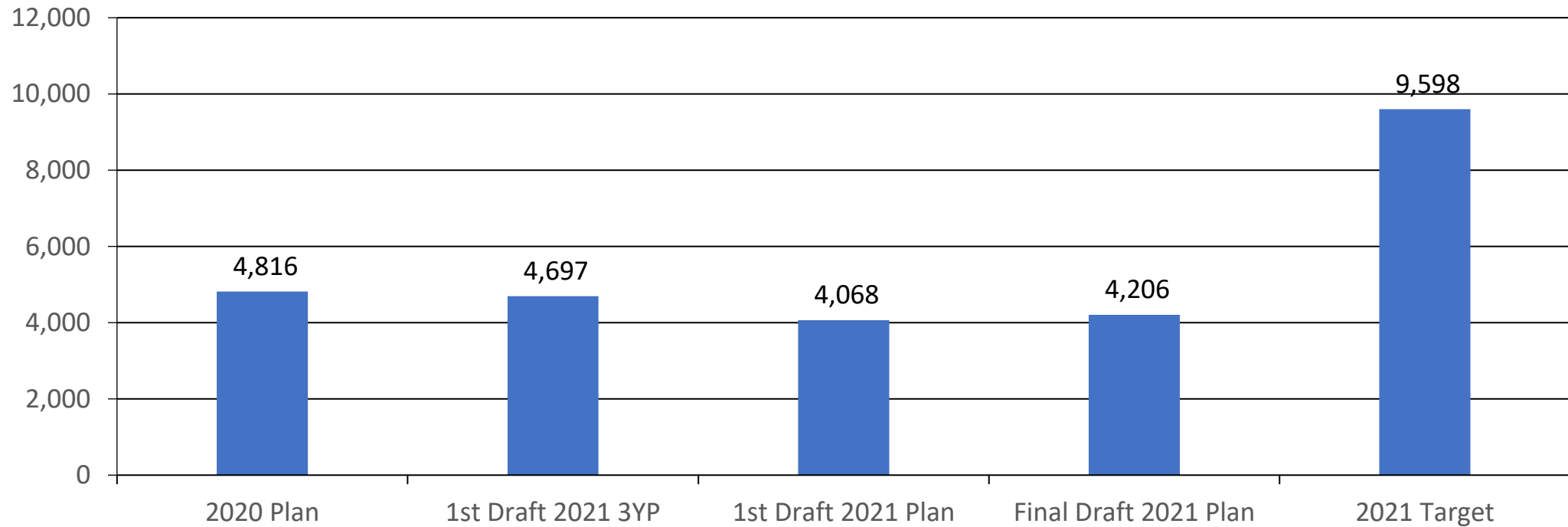


# GAS TRENDS AND COMPARISONS





# Gas Portfolio Lifetime Savings (BBtu)



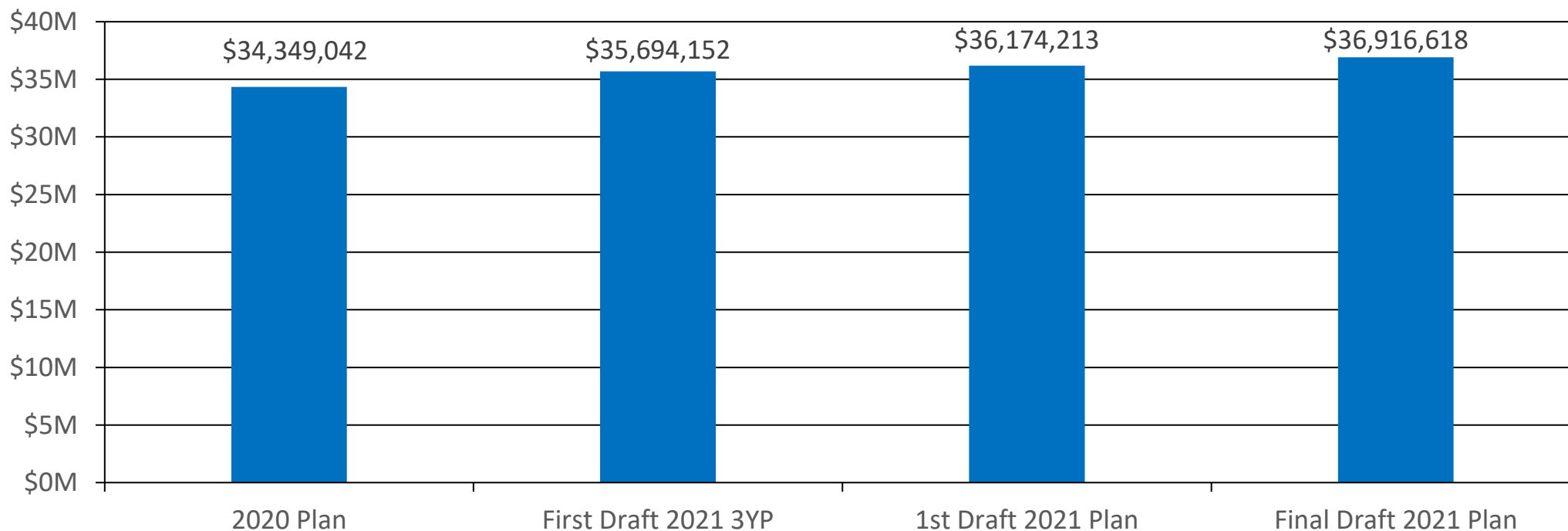
## Key Points

Planned lifetime gas savings have increased from 1<sup>st</sup> draft to 2<sup>nd</sup> draft

Still significant opportunity for further gas savings



# Gas Implementation Budget



## Key Points

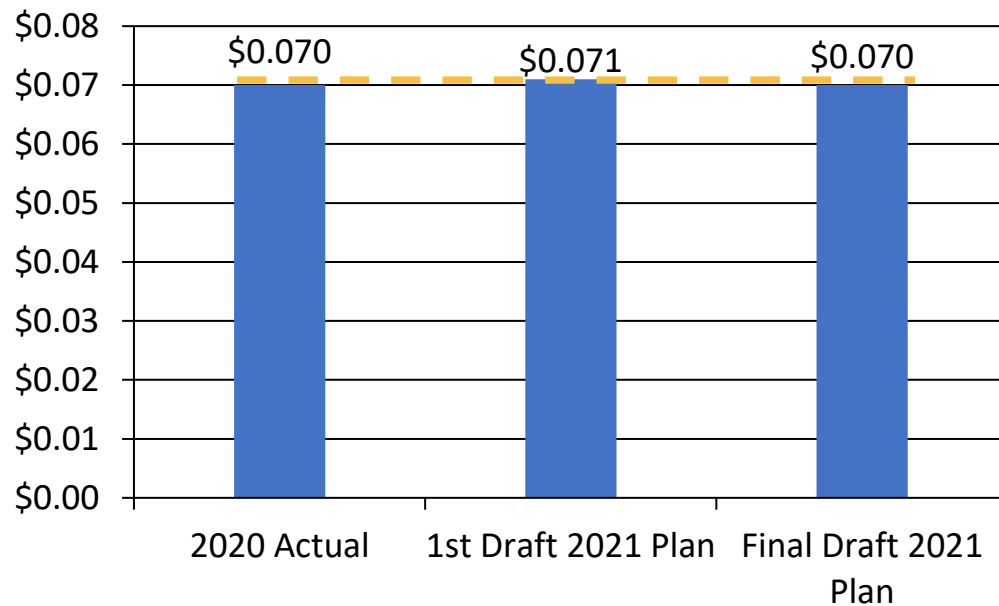
Gas budget has risen slightly since 1<sup>st</sup> draft 2021 Plan

Continues trend of moderate year-over-year growth in recent gas budgets

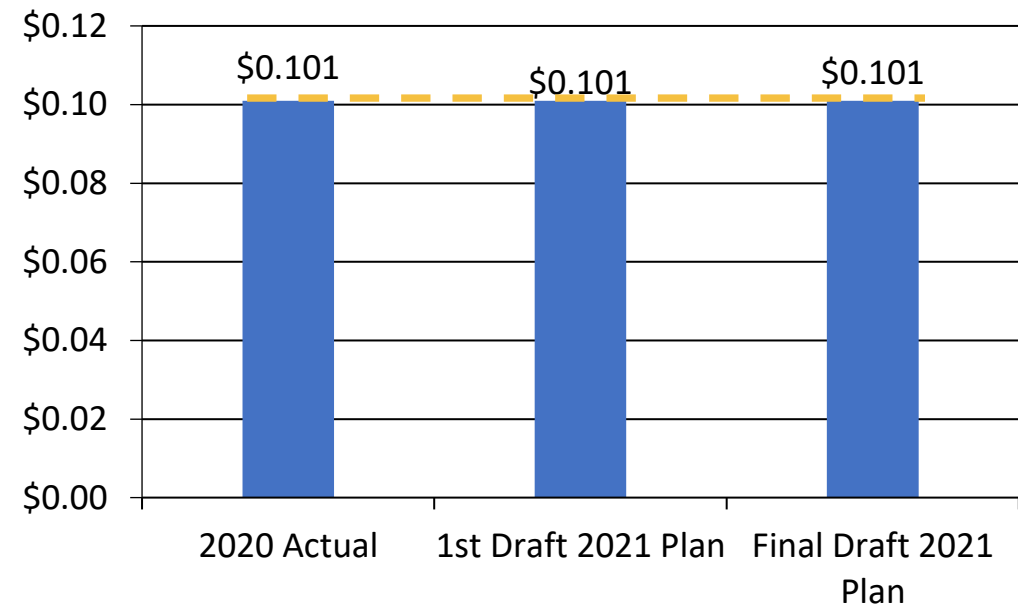


# Gas System Benefit Charge

C&I SBC (\$/Therm)



Residential SBC (\$/Therm)



## Key Points

Both Residential and C&I Gas SBCs held at 2020 levels

Virtually no change since 1<sup>st</sup> draft 2021 Annual Plan



# SECTOR HIGHLIGHTS





# Residential Highlights

## Electric: Virtually no change in net lifetime savings compared to 1<sup>st</sup> draft 2021 plan

- 4% decrease in savings for Income Eligible programs due to reduced measure lives for lighting measures
- 6% increase in HVAC program savings due to added focus on Electric Resistance to Heat Pump conversions
- Mostly offset by EM&V adjustments to measure lives and NTG factors for various measures

## Gas: Virtually no change in net lifetime gas savings compared to 1<sup>st</sup> draft 2021 plan

- Slight increase mostly due to increased measure lives





# Residential Highlights

## Key commitments in 2021 Annual Plan:

- Addressing pre-weatherization barriers
- Continuation of Virtual Home Energy Assessments
- Cross-Promotion of HVAC through EnergyWise
- HVAC equipment rebate bundles
- 100% Weatherization offering for Moderate Income customers
- 3<sup>rd</sup> Party support to expand capacity for serving Income Eligible customers
- Addressing underperformance in Multifamily market segment





# C&I Highlights

## Electric: 19% reduction in net lifetime savings compared to 1<sup>st</sup> draft 2021 plan

- Lower CHP savings biggest driver
- EM&V adjustments on lighting measures reduce overall claimable savings; reflects broad market adoption of LED
- “Custom” now broken out by end-use in plan; more clarity on program strategy

## Gas: 6% increase in net lifetime gas savings compared to 1<sup>st</sup> draft 2021 plan

- Mostly driven by increase in custom retrofit
- Increase in planned gas savings from SEM







# C&I Highlights

## Key commitments in 2021

- New push to catalog customer asset information collected during audits and other site visits to tailor future efficiency marketing to specific customer needs
- Emphasis on delivery of more controls for lighting and non-lighting projects
- Launching new Telecom initiative
- Delivery of weatherization for Small business customers
- Use of finance as an enabling strategy for greater C&I savings





# SUMMARY AND RECOMMENDATIONS





# 2021-2023 3YP Plan

## EERMC Priorities Compliance

Priority Item	YES/NO	Comments
Plan should actively seek to procure the savings Targets approved the EERMC / PUC	Yes	Within sbc impact restriction
Plan should focus on acquiring the Targets as cost-efficiently as possible	Yes	Cost closely reviewed
Plan should comply with the LCP Standards	Yes	Well documented in Plan
Plan should align, where appropriate, with the Council's Policy Recommendations proposed in the 2020 Annual Report to the General Assembly	Yes	Addressed all issues that Plan can influence
Plan development process should create forums for consistent, comprehensive, informed and publicly accountable stakeholder involvement	Yes	EE TWG held every month
Programs should support and compliment state policy and regulatory objectives, esp. those relating to greenhouse gas emission reductions and economic issues.	Yes	Generally referenced in Plan
Objectives for Energy Efficiency programs must ensure that all customers and segments of the market have access to the benefits of energy efficiency savings	Yes	Portfolio is sufficiently balanced
Objectives for EE programs must include dynamic strategies that coordinate with renewable energy efforts, state health initiatives, resiliency efforts, and any other relevant state and federal programs	Yes	Generally referenced in Plan



# EERMC Guidelines for Energy Efficiency and Conservation Plans

The Council shall take a leadership role in ensuring that RI ratepayers receive excellent value from EE Plans being implemented on their behalf. The Council shall do this by collaborating closely with the distribution company on design and implementation of the EM&V efforts presented by the company.

In addition to the other roles for the Council indicated in this filing, the distribution company shall seek ongoing input from, and collaboration with, the Council on development of the EE Plans. The distribution company shall seek to receive the endorsement of EE Plans by the Council prior to submission to the PUC.

The Council shall vote whether to endorse the Annual & Three-Year EE Plan... If the Council does not endorse the EE Plan(s), then the Council shall document the reasons and submit comments to the PUC for their consideration in final review of the EE Plans.

The company shall, in consultation with the Council, propose a process for Council input and review of EE Plans. This process is intended to build on the mutual expertise and interests of the Council and the company, as well as meet the monitoring responsibilities of the Council.

The Council shall prepare memos on its assessment of the cost effectiveness of the EE Plans, and submit them to the PUC no later than 3 weeks following the filing of the respective EE Plans with the PUC.



# Summary and Recommendations

2021 Annual Plan sufficiently meets all requirements & primary objectives:

- Electric and Gas Programs are Cost-Effective
- Portfolio Costs are less than the cost of supply
- Addresses issues of Prudence & Reliability
- Aligns with Least Cost Procurement Standards
- Reflects responsiveness to EERMC and Stakeholder Priorities



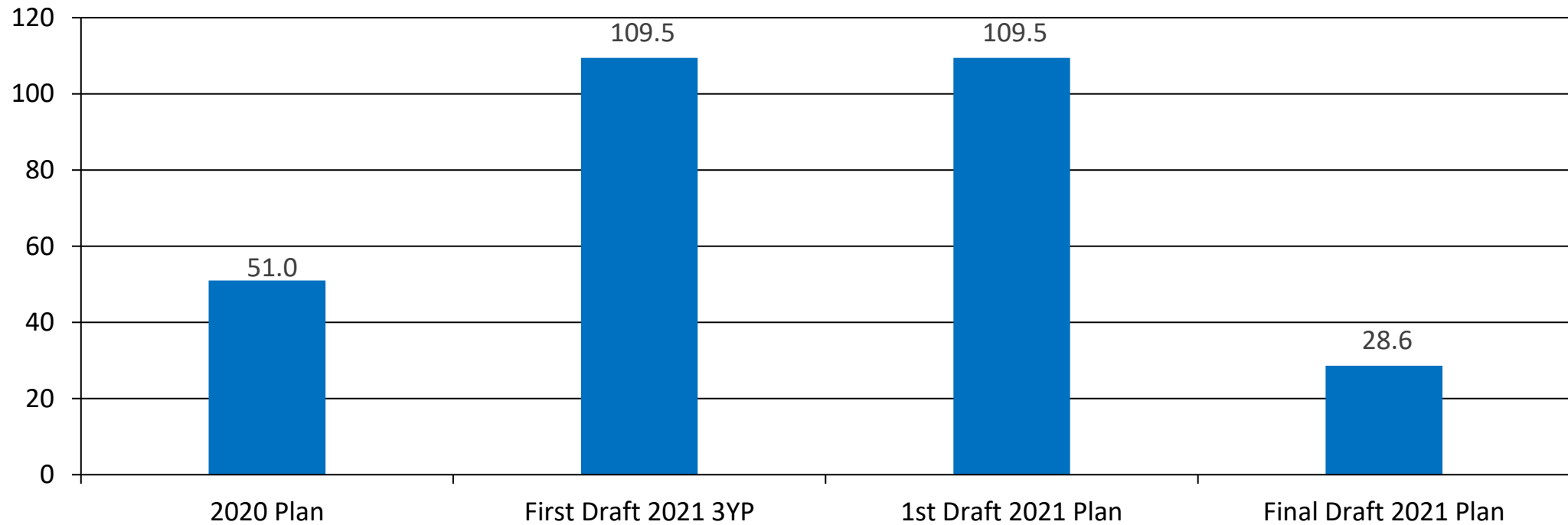


# APPENDICES





# Electric CHP Lifetime Savings (GWh)



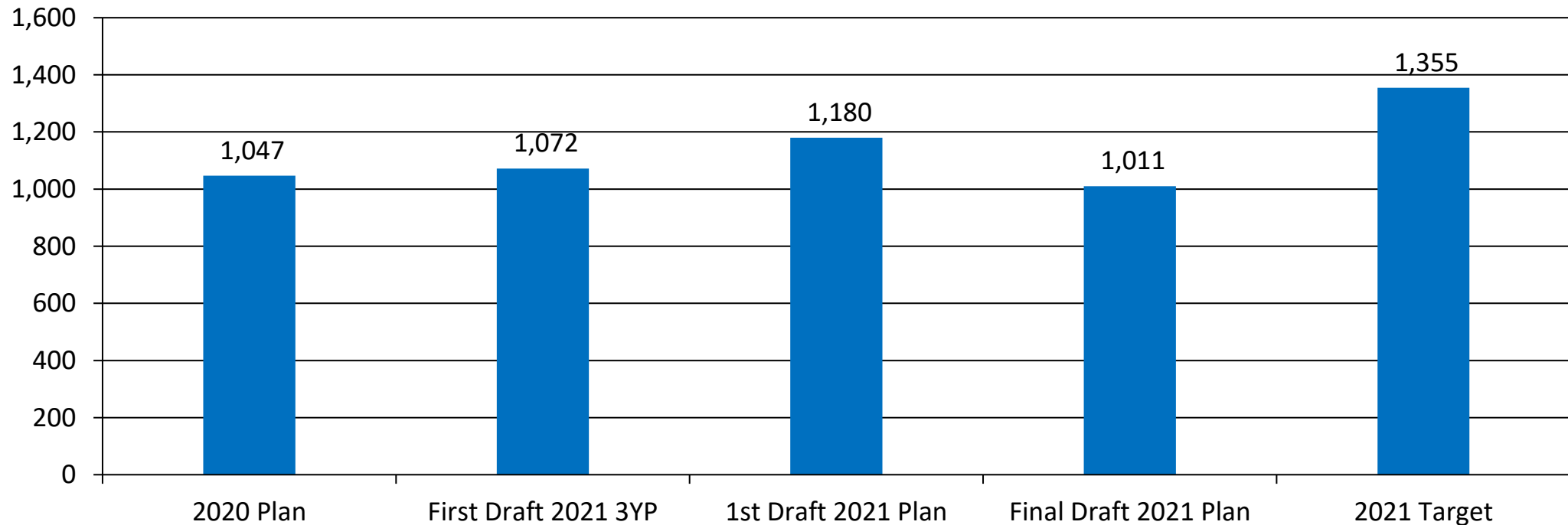
## Key Points

CHP declined in Final Draft 2021 Plan relative to earlier 2021 Planned CHP savings

Significantly more CHP in 2022 and 2023 in final Three Year Plan



# Electric C&I Lifetime Savings (GWh)



## Key Points

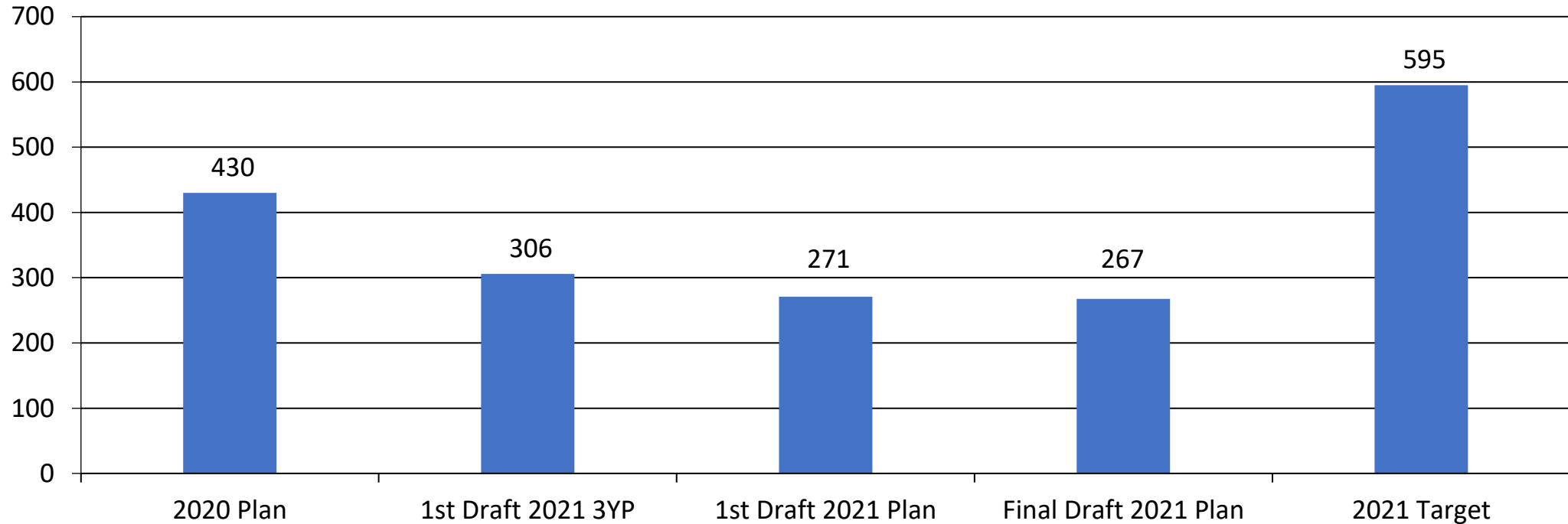
Planned lifetime electric savings have decreased from 1<sup>st</sup> draft to 2<sup>nd</sup> draft 2021 Plan

Large portion of 2<sup>nd</sup> draft decrease due to EM&V changes in net claimable savings





# Electric Residential Lifetime Savings (GWh)

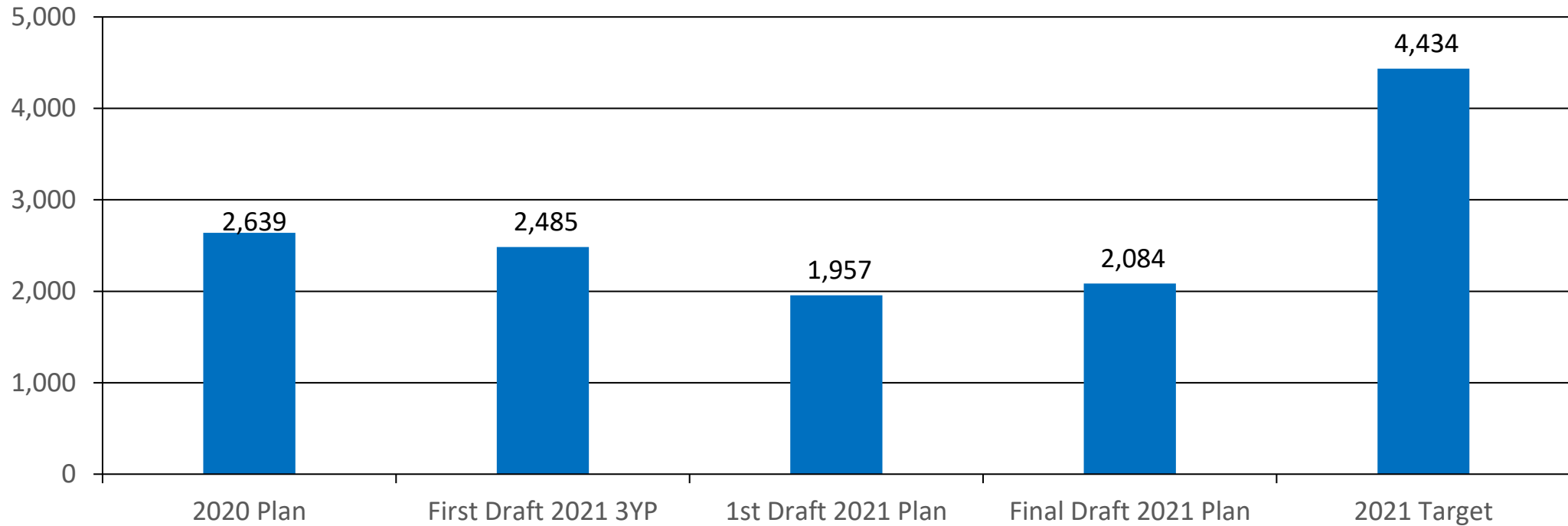


## Key Points

Residential sector impacted by reduced claimable lighting savings compared to 2020  
Decrease from 1<sup>st</sup> draft 2021 Plan driven by EM&V adjustments (small net change)



# C&I Lifetime Gas Savings (BBtu)



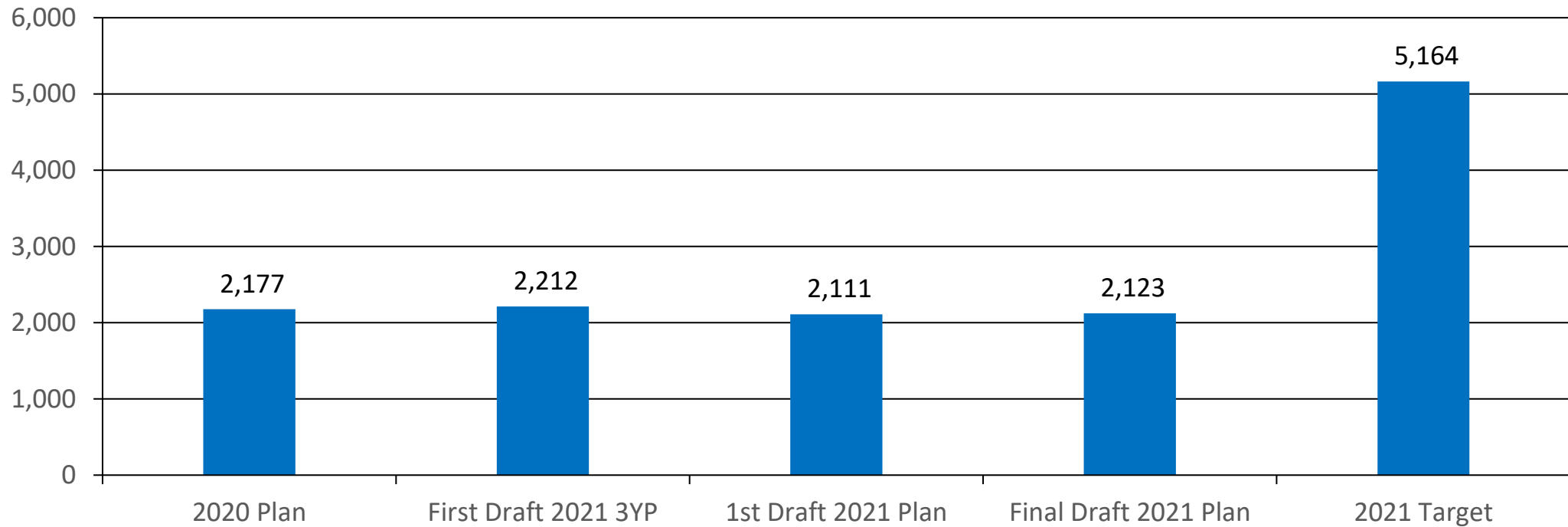
## Key Points

Planned lifetime gas savings have increased from 1<sup>st</sup> draft to 2<sup>nd</sup> draft 2021 Plan

Still significant opportunity for further gas savings



# Residential Lifetime Gas Savings (BBtu)



## Key Points

Planned lifetime gas savings have increased from 1<sup>st</sup> draft to 2<sup>nd</sup> draft 2021 Plan

Still significant opportunity for further gas savings



# 2021 Lifetime Electric Program Level Savings (MWh)

Program	2021 (2nd Draft)	2021 (2nd Draft) Compared to 2020 Plan		2021 (2nd Draft) Compared to 2021 (3YP First Draft)		2021 (2nd Draft) Compared to 2021 (1st Draft)	
		MWh	%	MWh	%	MWh	%
Small Business Direct Install	105,134	-20,932	-17%	-12,782	-11%	-26,280	-20%
Large Commercial New Construction	189,441	41,527	28%	6,837	4%	-12,327	-6%
Large Commercial Retrofit	744,562	-79,266	-10%	-135,948	-15%	-211,647	-22%
<b>C&amp;I Total</b>	<b>1,039,136</b>	<b>-58,671</b>	<b>-5%</b>	<b>-141,893</b>	<b>-12%</b>	<b>-250,254</b>	<b>-19%</b>
Single Family - Income Eligible Services	39,378	-6,345	-14%	-5,658	-13%	-2,548	-6%
Income Eligible Multifamily	31,690	-210	-1%	3,556	13%	-678	-2%
<b>Income Eligible Total</b>	<b>71,068</b>	<b>-6,555</b>	<b>-8%</b>	<b>-2,101</b>	<b>-3%</b>	<b>-3,226</b>	<b>-4%</b>
Residential New Construction	18,088	2,242	14%	-302	-2%	-1,689	-9%
ENERGY STAR® HVAC	51,309	17,348	51%	13,584	36%	3,010	6%
EnergyWise	14,788	-7,523	-34%	-3,924	-21%	-1,107	-7%
EnergyWise Multifamily	20,391	-8,953	-31%	-333	-2%	-372	-2%
Home Energy Reports	26,852	3,613	16%	3,613	16%	0	0%
ENERGY STAR® Lighting	26,801	-168,846	-86%	-47,507	-64%	0	0%
Residential Consumer Products	38,130	6,090	19%	-1,227	-3%	-141	0%
<b>Residential Total</b>	<b>196,358</b>	<b>-156,030</b>	<b>-44%</b>	<b>-36,097</b>	<b>-16%</b>	<b>-298</b>	<b>0%</b>
<b>Portfolio Total</b>	<b>1,306,562</b>	<b>-221,256</b>	<b>-14%</b>	<b>-180,091</b>	<b>-12%</b>	<b>-253,778</b>	<b>-16%</b>



# 2021 Electric Program-Level Spending (\$)

Program	2021 (2nd Draft)	2021 (2nd Draft) Compared to 2020 Plan		2021 (2nd Draft) Compared to 2021 (3YP First Draft)		2021 (2nd Draft) Compared to 2021 (1st Draft)	
Small Business Direct Install	\$8,883,559	\$1,314,962	17%	\$673,221	8%	-\$131,916	-1%
Large Commercial New Construction	\$8,500,175	\$3,164,440	59%	-\$452,651	-5%	-\$10,955	0%
Large Commercial Retrofit	\$31,930,242	\$8,128,922	34%	\$363,847	1%	-\$1,525,126	-5%
C&I Financing	\$5,000,000	-\$216,666	-4%	\$0	0%	\$5,000,000	
Community Based Initiatives - C&I	\$74,531	\$8,438	13%	\$0	0%	\$0	0%
Commercial Pilots	\$0	-\$106,269	-100%	-\$183,269	-100%	-\$163,269	-100%
Commercial ConnectedSolutions	\$2,990,106	\$911,626	44%	-\$1,253,569	-30%	-\$1,239,759	-29%
Commercial Workforce Development	\$468,688	\$468,688		\$468,688		\$0	0%
<b>C&amp;I Total</b>	<b>\$57,847,300</b>	<b>\$13,674,140</b>	<b>31%</b>	<b>-\$383,734</b>	<b>-1%</b>	<b>\$1,928,975</b>	<b>3%</b>
Single Family - Income Eligible Services	\$13,759,324	\$913,215	7%	-\$177,576	-1%	\$11,587	0%
Income Eligible Multifamily	\$4,830,800	\$1,281,794	36%	\$973,646	25%	-\$33,231	-1%
Income Eligible Workforce Development	\$114,190	\$114,190		\$114,190		\$0	0%
<b>Income Eligible Total</b>	<b>\$18,704,314</b>	<b>\$2,309,199</b>	<b>14%</b>	<b>\$910,260</b>	<b>5%</b>	<b>-\$21,644</b>	<b>0%</b>
Residential New Construction	\$1,544,335	\$570,882	59%	\$335,596	28%	\$193,243	14%
ENERGY STAR® HVAC	\$3,487,798	\$962,672	38%	\$557,550	19%	\$61,907	2%
EnergyWise	\$17,033,340	\$1,341,166	9%	\$596,007	4%	\$146,222	1%
EnergyWise Multifamily	\$3,056,836	\$252,495	9%	\$165,786	6%	-\$46,077	-1%
Home Energy Reports	\$2,641,681	-\$86,402	-3%	-\$71,317	-3%	\$1,475	0%
ENERGY STAR® Lighting	\$5,274,753	-\$10,101,057	-66%	-\$312,850	-6%	\$49,870	1%
Residential Consumer Products	\$2,681,236	\$482,072	22%	\$23,852	1%	\$8,267	0%
Energy Efficiency Education	\$40,000	\$0	0%	\$0	0%	\$0	0%
Comprehensive Marketing - Residential	\$332,706	-\$49,594	-13%	-\$49,594	-13%	-\$3,572	-1%
Community Based Initiatives - Residential	\$226,161	\$22,277	11%	-\$3,035	-1%	\$0	0%
Residential ConnectedSolutions	\$1,959,725	\$1,498,098	325%	\$1,441,361	278%	\$1,103,776	129%
Residential Pilots	\$0	-\$287,846	-100%	-\$214,346	-100%	-\$214,346	-100%
Residential Workforce Development	\$284,722	\$284,722		\$284,722		\$0	0%
<b>Residential Total</b>	<b>\$38,563,295</b>	<b>-\$5,110,516</b>	<b>-12%</b>	<b>\$2,753,732</b>	<b>8%</b>	<b>\$1,300,766</b>	<b>3%</b>
EERMC	\$845,559	-\$48,128	-5%	-\$175,387	-17%	-\$175,387	-17%
OER	\$845,559	-\$48,128	-5%	-\$175,387	-17%	-\$175,387	-17%
<b>Regulatory Total</b>	<b>\$1,691,117</b>	<b>-\$96,256</b>	<b>-5%</b>	<b>-\$350,773</b>	<b>-17%</b>	<b>-\$350,773</b>	<b>-17%</b>
<b>Portfolio Total</b>	<b>\$116,806,026</b>	<b>\$10,776,567</b>	<b>10%</b>	<b>\$2,929,485</b>	<b>3%</b>	<b>\$2,857,323</b>	<b>3%</b>



# 2021 Lifetime Gas Program-Level Savings (MMBtu)

Program	2021 (2nd Draft)	2021 (2nd Draft) Compared to 2020 Plan		2021 (2nd Draft) Compared to 2021 (3YP)		2021 (2nd Draft) Compared to 2021 (1st Draft)	
		Value	%	Value	%	Value	%
Large Commercial New Construction	437,398	-339,349	-44%	-272,713	-38%	-220,933	-34%
Large Commercial Retrofit	1,455,776	-233,269	-14%	-145,862	-9%	348,328	31%
Small Business Direct Install	48,861	31,199	177%	28,770	143%	-4,491	-8%
Commercial & Industrial Multifamily	141,869	-13,727	-9%	-11,290	-7%	3,935	3%
<b>C&amp;I Total</b>	<b>2,083,905</b>	<b>-555,146</b>	<b>-21%</b>	<b>-401,095</b>	<b>-16%</b>	<b>126,840</b>	<b>6%</b>
Single Family - Income Eligible Services	226,500	24,584	12%	0	0%	0	0%
Income Eligible Multifamily	352,022	-95,939	-21%	-9,843	-3%	1,800	1%
<b>Income Eligible Total</b>	<b>578,522</b>	<b>-71,355</b>	<b>-11%</b>	<b>-9,843</b>	<b>-2%</b>	<b>1,800</b>	<b>0%</b>
Energy Star® HVAC	667,485	171,658	35%	112,029	20%	1,597	0%
EnergyWise	549,037	-58,992	-10%	-119,798	-18%	4,241	1%
EnergyWise Multifamily	148,675	-76,403	-34%	-49,552	-25%	4,293	3%
Home Energy Reports	93,548	-21,878	-19%	-21,878	-19%	0	0%
Residential New Construction	85,272	2,301	3%	0	0%	0	0%
<b>Residential Total</b>	<b>1,544,017</b>	<b>16,685</b>	<b>1%</b>	<b>-79,199</b>	<b>-5%</b>	<b>10,131</b>	<b>1%</b>
<b>Portfolio Total</b>	<b>4,206,444</b>	<b>-609,817</b>	<b>-13%</b>	<b>-490,137</b>	<b>-10%</b>	<b>138,771</b>	<b>3%</b>



# 2021 Gas Program-Level Spending

Program	2021 (2nd Draft)	2021 (2nd Draft) Compared to 2020 Plan		2021 (2nd Draft) Compared to 2021 (3YP)		2021 (2nd Draft) Compared to 2021 (1st Draft)	
Large Commercial New Construction	\$2,759,162	\$106,626	4%	-\$48,538	-2%	-\$21,024	-1%
Large Commercial Retrofit	\$5,169,116	\$138,167	3%	-\$82,159	-2%	\$182,057	4%
Small Business Direct Install	\$332,651	\$207,646	166%	\$191,105	135%	-\$318	0%
Commercial & Industrial Multifamily	\$953,219	-\$14,689	-2%	-\$107,040	-10%	-\$10,526	-1%
Comprehensive Marketing - Commercial and Industrial	\$0	\$0		\$0		\$0	
Commercial Pilots	\$215,780	-\$150,235	-41%	-\$54,232	-20%	-\$54,232	-20%
Finance Costs	\$0	\$0		-\$500,000	-100%	\$0	
Community Based Initiatives - C&I	\$24,844	\$2,813	13%	\$0	0%	\$0	0%
RIIB		\$0		\$0		\$0	
Commercial Workforce Development	\$164,510	\$164,510		\$164,510		\$0	0%
<b>C&amp;I Total</b>	<b>\$9,619,282</b>	<b>\$454,839</b>	<b>5%</b>	<b>-\$436,353</b>	<b>-4%</b>	<b>\$95,958</b>	<b>1%</b>
Single Family - Income Eligible Services	\$6,738,774	\$786,437	13%	-\$65,595	-1%	-\$17,878	0%
Income Eligible Multifamily	\$3,254,067	\$244,571	8%	-\$1,864	0%	-\$27,276	-1%
Income Eligible Workforce Development	\$49,623	\$49,623		\$49,623		\$0	0%
<b>Income Eligible Total</b>	<b>\$10,042,464</b>	<b>\$1,080,632</b>	<b>12%</b>	<b>-\$17,835</b>	<b>0%</b>	<b>-\$45,155</b>	<b>0%</b>
Energy Star® HVAC	\$3,673,047	\$979,981	36%	\$792,950	28%	\$236,059	7%
EnergyWise	\$10,063,228	\$1,945,590	24%	\$864,782	9%	\$565,002	6%
EnergyWise Multifamily	\$1,491,590	-\$20,471	-1%	-\$3,716	0%	-\$19,644	-1%
Home Energy Reports	\$450,864	-\$20,646	-4%	-\$10,660	-2%	-\$314	0%
Residential New Construction	\$674,827	\$50,816	8%	\$19,419	3%	-\$1,519	0%
Comprehensive Marketing - Residential	\$64,758	-\$15,144	-19%	-\$15,144	-19%	-\$253	0%
Residential Pilots	\$0	\$0		\$0		\$0	
Community Based Initiatives - Residential	\$75,839	\$6,924	10%	-\$1,514	-2%	\$0	0%
Residential Workforce Development	\$118,267	\$118,267		\$118,267		\$0	0%
<b>Residential Total</b>	<b>\$16,612,419</b>	<b>\$3,045,316</b>	<b>22%</b>	<b>\$1,764,384</b>	<b>12%</b>	<b>\$779,331</b>	<b>5%</b>
EERMC	\$321,226	-\$41,220	-11%	-\$43,865	-12%	-\$43,865	-12%
OER	\$321,226	-\$41,220	-11%	-\$43,865	-12%	-\$43,865	-12%
<b>Regulatory Total</b>	<b>\$642,453</b>	<b>-\$82,439</b>	<b>-11%</b>	<b>-\$87,730</b>	<b>-12%</b>	<b>-\$87,730</b>	<b>-12%</b>
<b>Portfolio Total</b>	<b>\$36,916,618</b>	<b>\$4,498,348</b>	<b>14%</b>	<b>\$1,222,466</b>	<b>3%</b>	<b>\$742,404</b>	<b>2%</b>