



Clean Energy Partnership Q3 Board Meeting July 27, 2018



Agenda

1. Welcome and Introductions
2. Review and Approve Agenda and Q2 Minutes
3. Quarterly Update from EVAC Co-Chairs
4. 2017 Annual Report
5. Utility Funding Flexibility Presentation
6. “Partnership Activity” draft concepts under development for next work plan



Quarterly Update from EVAC Co-Chairs



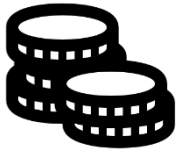
2017 Annual Report



2017 Clean Energy Partnership Annual Report	
ES	Executive Summary – 2017 Highlights
1	Citywide GHG emissions (electricity & natural gas)
2	Commercial building energy use
3	Residential Building Energy Use
4	Local or directly purchased renewable energy
5	Home Energy Squad Visits
6	Low Income Program Activity
7	Air Sealing/Insulation Activity
8	Multi-Family Building Program Activity
A	2017-2018 Work Plan Activities Progress

Executive Summary:

2017 Partnership Highlights



- ~\$1 million new funding to climate and energy programs via City's franchise fee increase; 9 new and expanded City programs underway in 2018



- Barriers & benefits to EE identified for hard-to-reach communities.



- New Tools Underdevelopment:
 - On-Bill Loan Repayment (CenterPoint Energy)
 - Energy Data Aggregation (CenterPoint Energy)
 - Small Business Refrigeration Program (Xcel Energy)



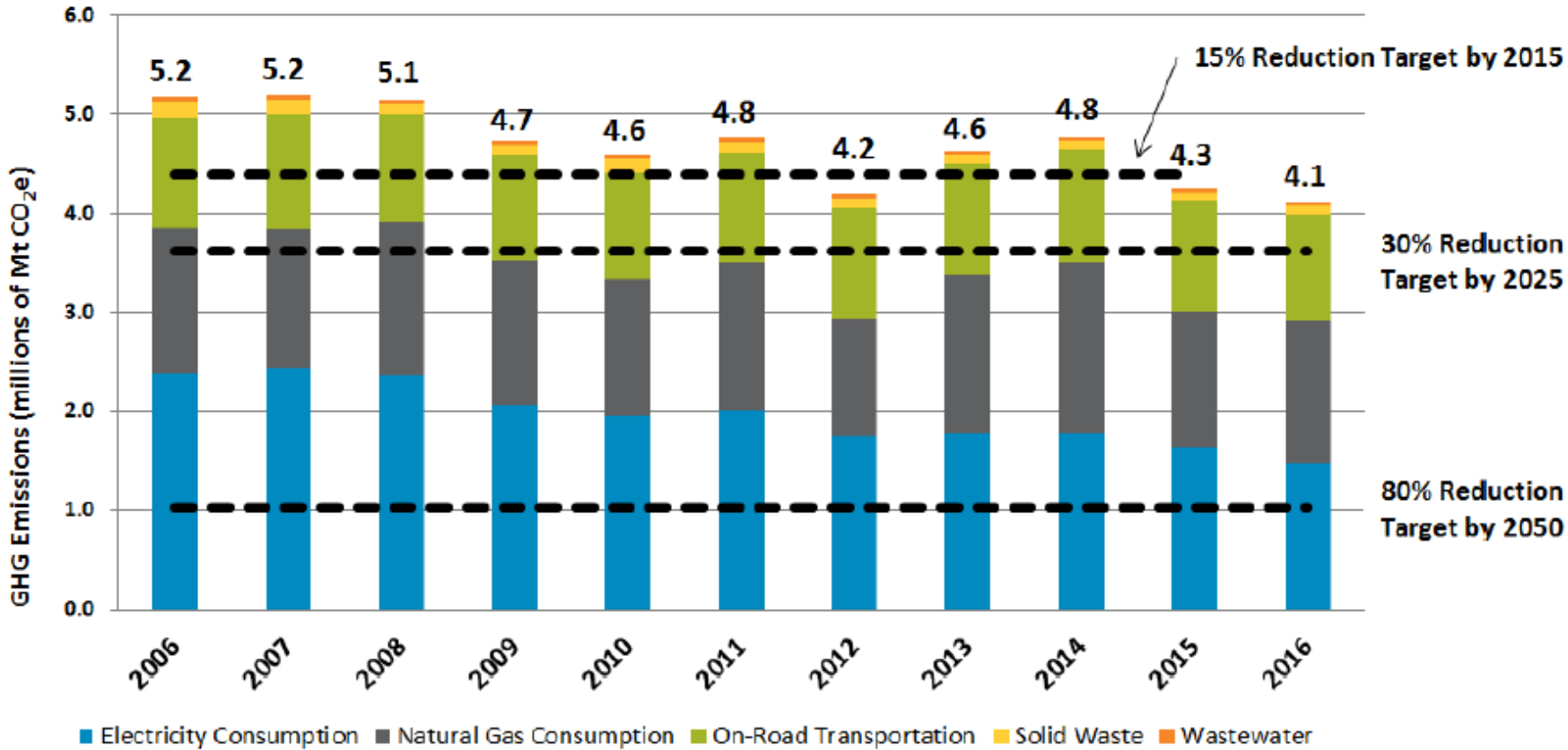
- Conservation Improvement Programs (CIP)

Minneapolis 2017 results:




- ≈ 98,660 metric tons of carbon dioxide saved (2.4% 2016 emissions)
- ≈ \$12 million saved by customers in year 1
- ≈ \$18 million invested in Minneapolis conservation

Metric 1.0: Citywide Greenhouse Gas Emissions

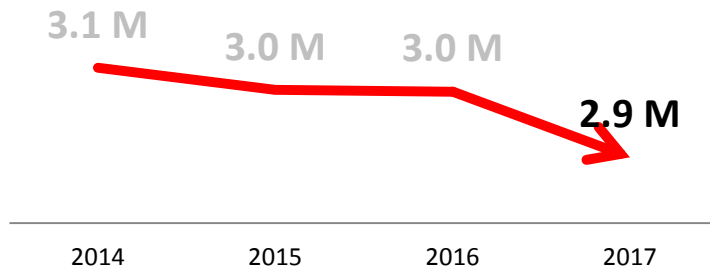
Minneapolis Greenhouse Gas Emissions (GHG) from Citywide Activities



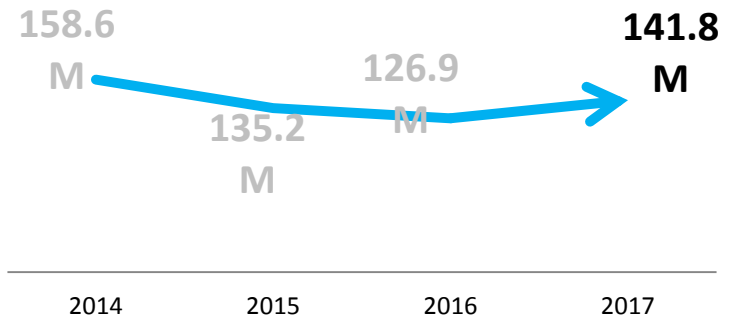
Metric 2.0: Commercial Buildings

Xcel Energy 
CenterPoint Energy 
City of Minneapolis 

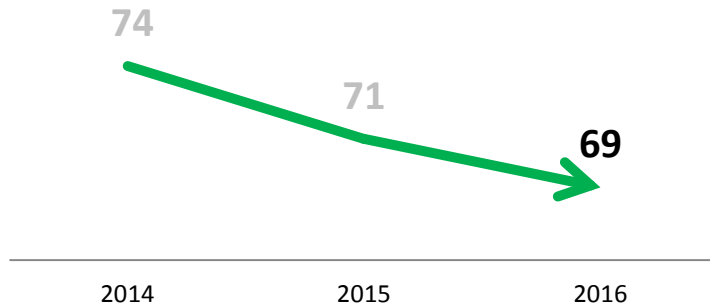
Commercial/Industrial Building Electricity Use (MWh)



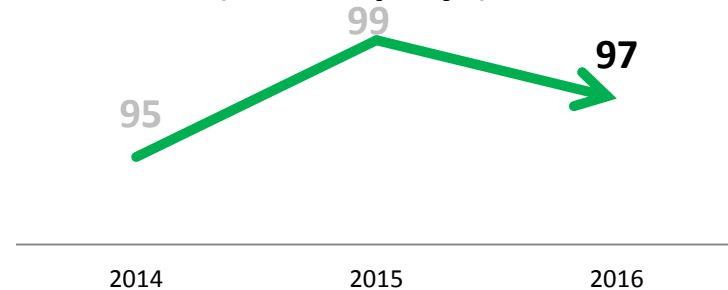
Commercial Building Natural Gas use (therms)



Average ENERGY STAR score of benchmarked buildings



Average weather-normalized EUI of benchmarked buildings (kBtu/sqft/yr)



Metric 2.2: Commercial Utility EE Program Utilization

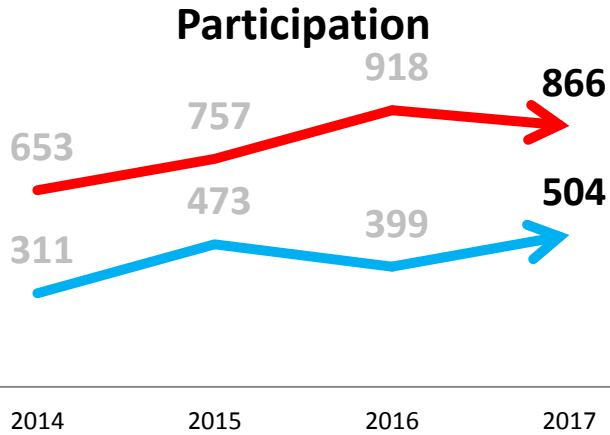
CenterPoint Energy

- Foodservice Equipment Rebates
- Heating & Water Heating Rebates
- Custom Rebates
- Natural Gas Energy Analysis
- Industrial Process Efficiency
- Training & Education
- Engineering & Certification Assistance
- Industrial Process Steam Trap Audit

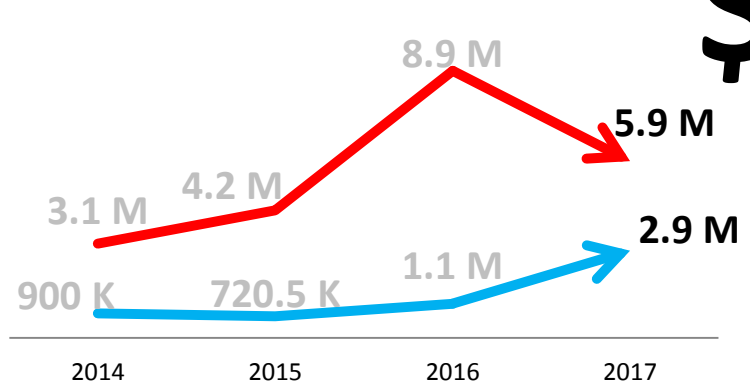
Xcel Energy

- Commercial Efficiency
 - Comprehensive Efficiency
 - Heating & Cooling
 - Custom
 - Data
 - Controls
 - EDA/EEB
 - Fluid System
 - Food Service
 - Interrupted Rates
 - Lighting
 - One Stop
 - Motors
 - Process Efficiency
 - Recommissioning
 - Saver's Switch
 - Turn Key
- Energy Design Assistance
 - Multi-Family Building Efficiency

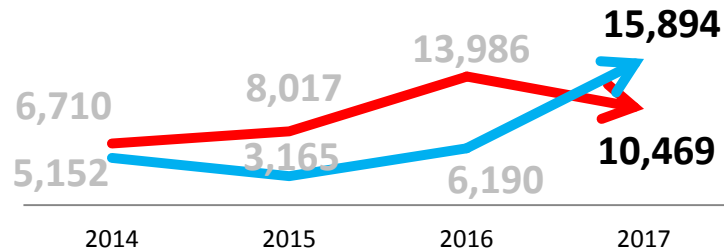
Metric 2.2: Commercial Utility EE Program Utilization



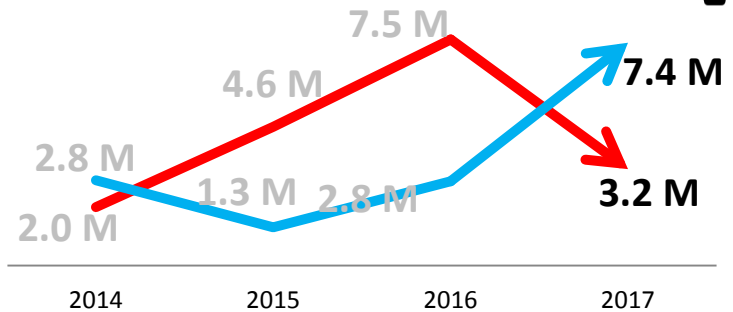
Rebate Dollars Spent (\$)



Estimated Annual Energy Savings (Household Equivalent)



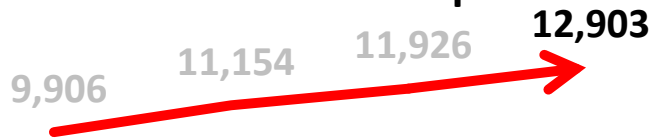
Estimated Annual Cost Savings (\$)



Metric 4.0: Renewable Energy

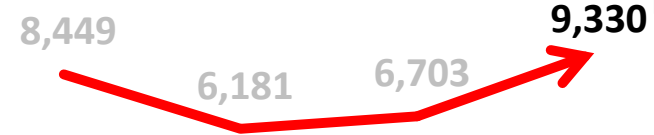


Windsorce Participants



2014 2015 2016 2017

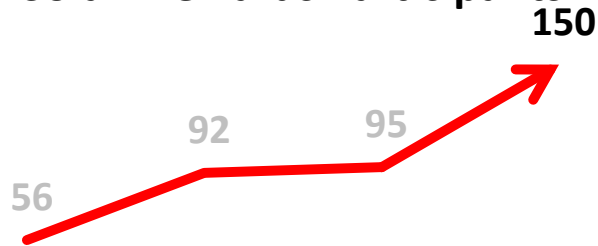
Windsorce - MWh (Household Equivalent)



2014 2015 2016 2017

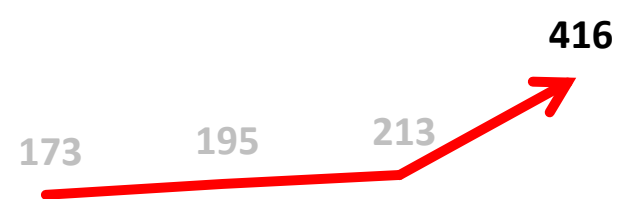


Solar*Rewards Participants



2014 2015 2016 2017

Solar*Rewards - MWh (Household Equivalent)



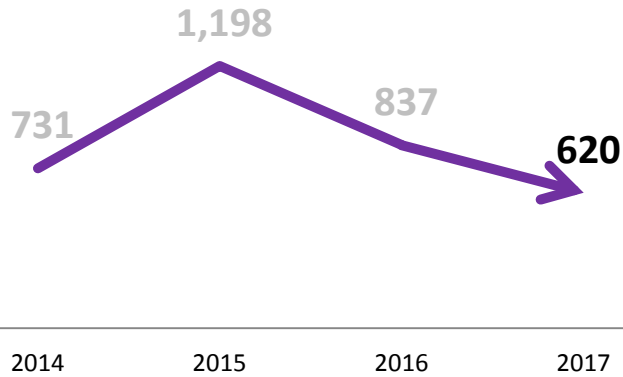
2014 2015 2016 2017



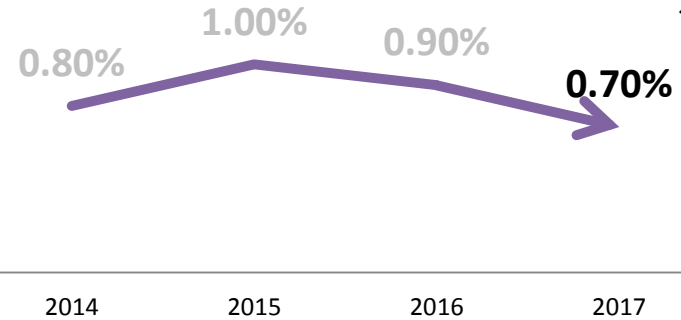
Metric 5.0: Home Energy Squad



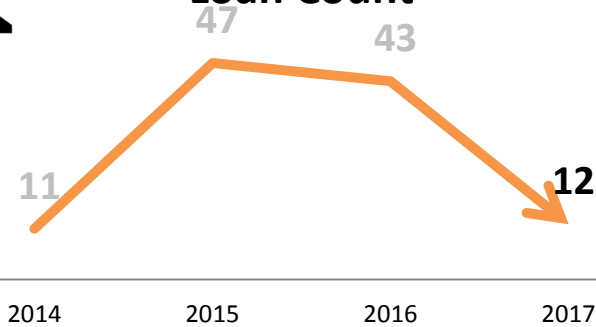
Participation



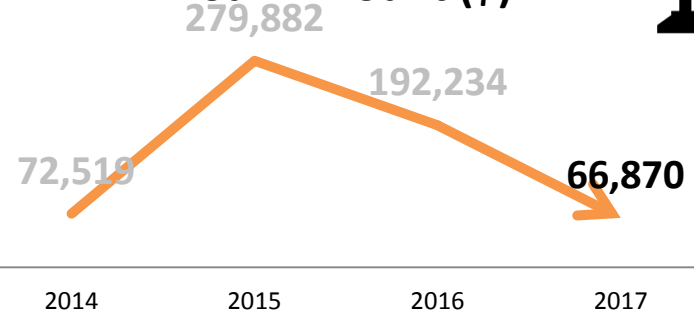
Percent of 1-4 unit residences served by HES (incremental)



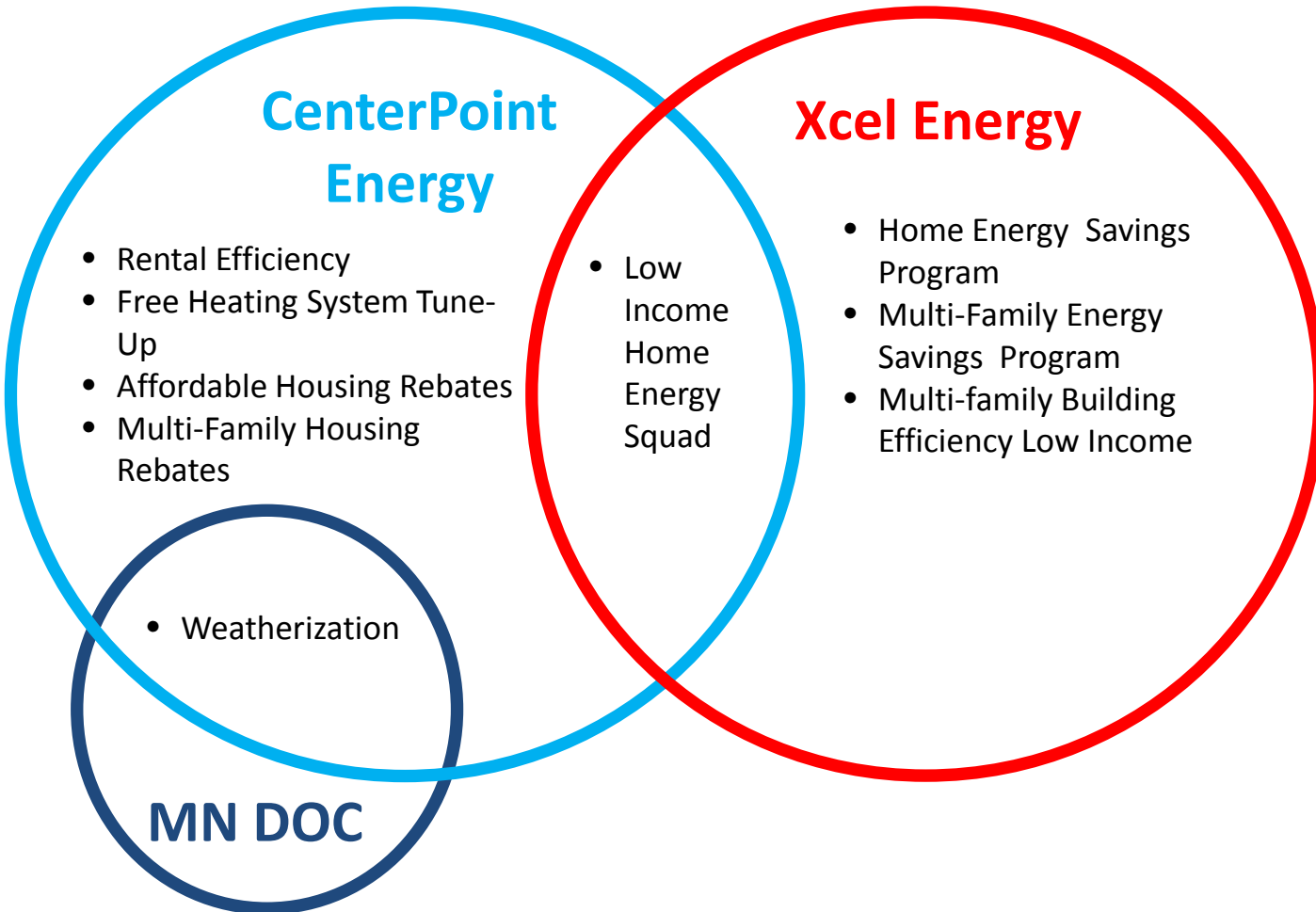
HES-Driven Energy Efficiency Loan Count



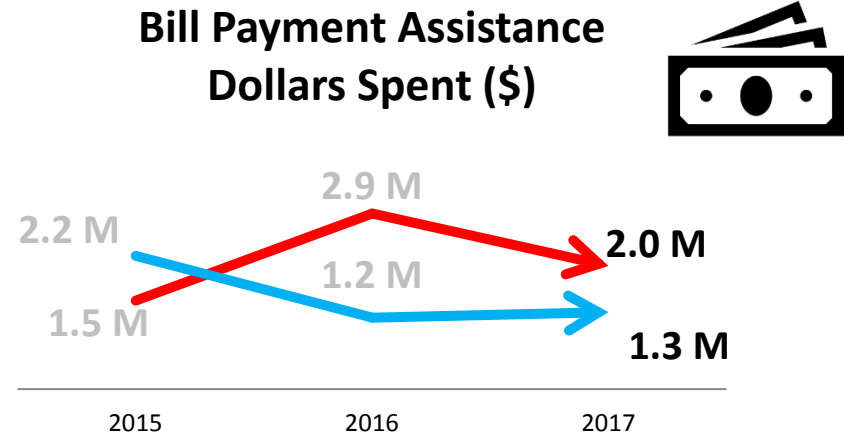
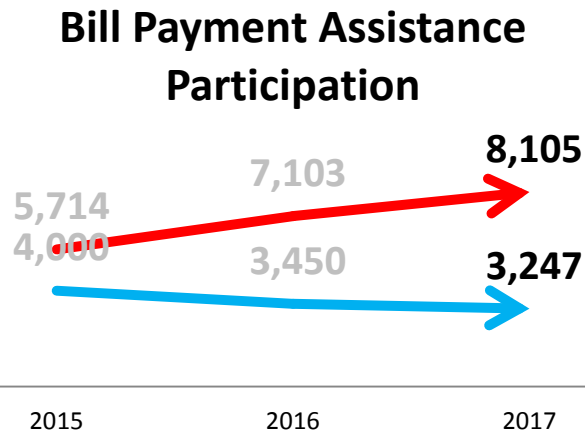
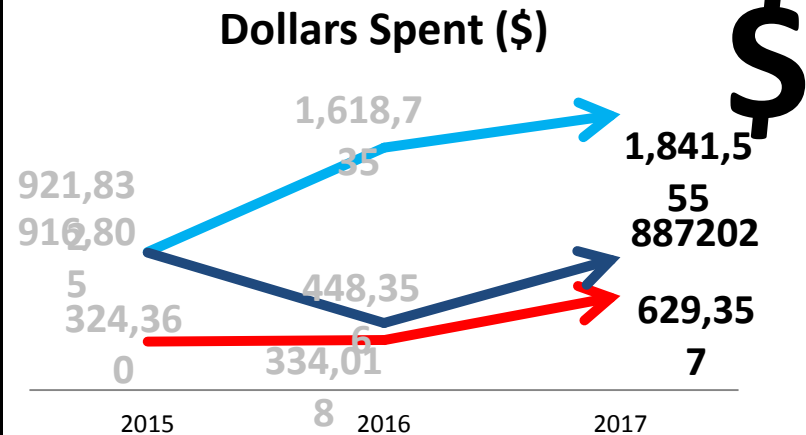
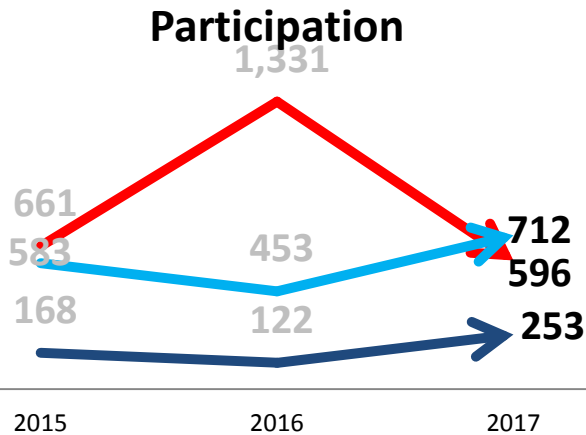
HES-Driven Energy Efficiency Loan Amount (\$)



Metric 6.0: Low Income Services



Metric 6.0: Low Income Services



Metric 7.0: Air Sealing & Insulation



Participants



2015 2016 2017

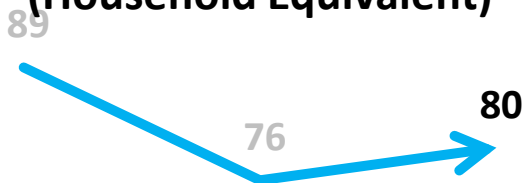
Rebates Dollars Spent (\$) [VALUE]



2015 2016 2017

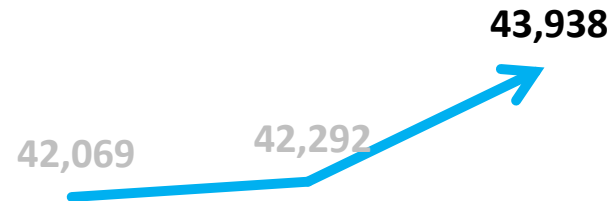


Estimated Annual Energy Savings (Household Equivalent)



2015 2016 2017

Estimated Annual Cost Savings (\$)



2015 2016 2017

Metric 8.0: Multi-Family Program Participation

CenterPoint Energy

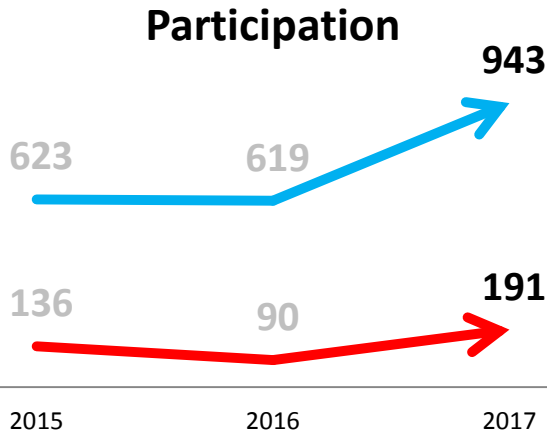
- Foodservice Equipment Rebates
- Heating & Water Heating Rebates
- Custom Rebates
- Natural Gas Energy Analysis
- Training & Education
- Engineering & Certification Assistance
- Affordable Housing Multi-Family Rebate

Xcel Energy

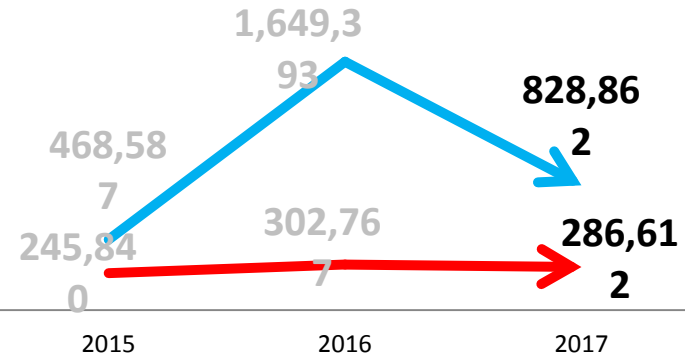
- Energy Design Assistance
- Multi-family Building Efficiency

- One Stop Shop
- Multi-Family Energy Savings
- Air Conditioning
- Cooling
- Lighting
- Res Demand Response
- Res Heating
- Saver's Switch
- Smart Thermostat
- Turn Key Services

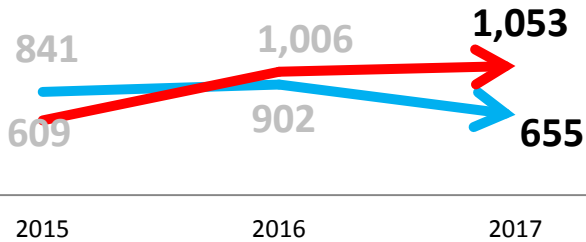
Metric 8.0: Multi-Family Program Participation



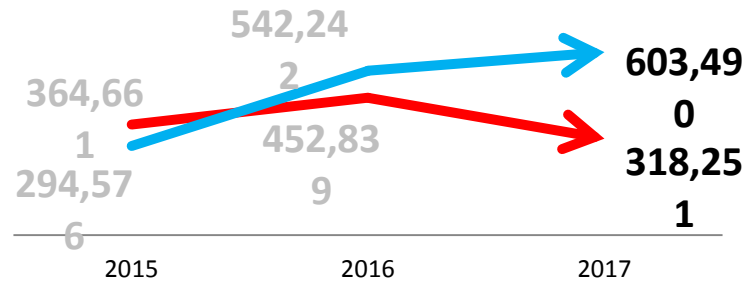
Rebate Dollars Spent (\$)



Estimated Annual Energy Savings (Household Equivalent)



Estimated Annual Cost Savings (\$)





2017 Annual Report

Looking Ahead:

- Evaluate metrics
- Align metrics with City climate & energy goals
- Communicate trends and trajectories w/ new visuals
- Report progress on Work Plan Activities



Utility Funding Flexibility Discussion

Utility Funding Flexibility Discussion

- Board Direction
- Background
- Methodology
- Findings
- Recommendations
- Next Steps



Utility Funding Flexibility Discussion

Direction to Utilities:

- Review CIP Programs to determine opportunities for realignment with City activities.
- Discuss process for developing new initiatives or programs.



Utility Funding Flexibility Discussion

Conservation Improvement Program (CIP):

- MN §216B.241 Energy Conservation Improvement
- Overseen by MN DOC, Division of Energy Resources
- Minimum Spending Requirements
 - 0.5% of Gas Company's state revenue
 - 2.0% of Electric Company's state revenue
- Annual Energy Savings Goals: 1.5% retail sales
- Administered by Gas & Electric Companies
 - paid for by customers

Utility Funding Flexibility Discussion

Conservation Improvement Program (CIP):

- CIP Plans submitted to DOC (every 3 years)
 - Next submission – June 2019
 - Program modifications (including pilots) can be submitted anytime
 - Programs evaluated based on cost-effectiveness and the reliability of technologies employed
- Annual CIP Status Report submitted to DOC/PUC
 - April [Electric] & May [Gas] Companies



Utility Funding Flexibility Discussion

Conservation Improvement Program (CIP):



- Utility Program Development Process [120-360 days]
 - Research & Program or Pilot Design
 - Pilots: 1) Intent to determine viability statewide & 2) require designated time frame, evaluation process, and can evaluate cost effectiveness
 - Regulatory Filing Decision[90-120 days]
 - CIP Program or Modification (incl. Pilots) > MN DOC
 - New Tariff (incl. Pilots) > MN PUC
 - Program Launch [if approved]



Utility Funding Flexibility Discussion

Methodology:

- Review CIP Program Participation, Savings, and Spending in City of Minneapolis in 2017
 - What are the programs in each customer group w/ the highest energy savings?
 - What are the programs w/ the highest energy savings per customer?

Customer Group			
Residential	<ul style="list-style-type: none"> • Home Efficiency Rebates • Air Sealing & Insulation Rebates • No Cost DIY Kits • Home Energy Squad • Home Energy Reports • High Efficiency Home • New Home Construction Rebates 	<ul style="list-style-type: none"> • Air-Conditioning • Efficient New Construction • Home Energy Squad • Home Energy Audits • Insulation Rebates • Refrigerator Recycling • Residential Demand Response • Residential Heating • Smart Thermostats 	<ul style="list-style-type: none"> • Home Energy Squad Subsidy • 0% Interest Loans • Inclusive Financing Feasibility Study
Low Income	<ul style="list-style-type: none"> • Weatherization • Rental Efficiency • Heating System Tune-Up • Non-Profit Affordable Housing Rebate • Multi-Family Housing Rebates 	<ul style="list-style-type: none"> • Home Energy Savings Program • Multi-Family Energy savings Program (MESP) • Low Income home Energy Squad 	<ul style="list-style-type: none"> • Green Zone Community Engagement • Home Energy Squad Subsidy in Green Zone and residents between 50-100% AMI • Green Cost Share (Housing)
Commercial	<ul style="list-style-type: none"> • Heating & Water Heating Rebates • Foodservice Equipment Rebates • Custom Rebates • Energy Analysis • Design Assistance • Process Efficiency • Training & Education • Multi-Family Building Efficiency 	<ul style="list-style-type: none"> • Commercial Efficiency • Computer Efficiency • Cooling Efficiency • Custom Efficiency • Data Center Efficiency • Efficiency Controls • Energy Design Assistance/Energy Efficiency Buildings • Fluid System Optimization • Food Service Equipment • Heating Efficiency • Interrupted Rates • Lighting Efficiency • One Stop Efficiency Shop • Motors Efficiency • Process Efficiency • Recommissioning • Saver's Switch Business • Turn Key Services 	<ul style="list-style-type: none"> • Green Cost Share (Multi-Family) • Green Cost Share (Business) • Small Business Energy Initiative
Other	<ul style="list-style-type: none"> • Energy Data Aggregation Tool • On Bill Loan Repayment Tool • Marketing & Outreach • Research & Development 	<ul style="list-style-type: none"> • Data Aggregation Tool • Marketing & Outreach • Research & Development • Energy Information Systems Pilot (EIS) • ENERGY STAR® Retail Products Platform Pilot 	<ul style="list-style-type: none"> • Workforce Development Assessment

Utility Funding Flexibility Discussion

Findings

Customer Group	Residential	Low Income	Commercial
Highest Energy Savings Programs in Minn. 2017	<p>CenterPoint Energy Home Efficiency Rebate Program</p> <ul style="list-style-type: none"> • Furnaces • Boilers <p>Xcel Energy Residential Heating</p> <ul style="list-style-type: none"> • Electrically Commutated Motor (ECM) in a furnace; forced air or new 	<p>CenterPoint Energy Weatherization</p> <p>Xcel Energy Low Income Multi-Family</p>	<p>CenterPoint Energy Custom Rebates</p> <p>Xcel Energy Lighting Efficiency</p>
Highest Energy Savings per Participant in Minn. 2017	<p>CenterPoint Energy Home Insulation Rebate Program</p> <p>Xcel Energy Home Insulation Rebate Program</p>	<p>CenterPoint Energy Low Income Multi-Family</p> <p>Xcel Energy Low Income Multi-Family</p>	<p>CenterPoint Energy Energy Design Assistance</p> <p>Xcel Energy</p> <ul style="list-style-type: none"> • Data Center Efficiency • Energy Design Assistance



Utility Funding Flexibility Discussion

Recommendations:

- Target high residential natural gas users for heating and insulation rebates
- Focus on increasing low income participation in Weatherization and Multi-Family Programs
- Engage high commercial natural gas users in custom programs and electric customers in lighting and whole building
- Create Minneapolis-focused pilots that, if successful, can be implemented territory-wide



Utility Funding Flexibility Discussion

Next Steps:

- Consider Utility Spending Findings & Annual Report Findings in development of Partnership Activities for the next work plan.



**“Partnership Activity” draft concepts
under development for next work plan**



Work Plan Development Process

2018 Quarter	Development Process	Responsible Party
1	<ul style="list-style-type: none">Develop and approve Board Priorities and Approaches	Board
2	<ul style="list-style-type: none">Brainstorm Partnership Activities that align with Board Priorities, Approaches, and Principles.Consider and analyze EVAC ideasDevelop 2-3 Partnership Activities per Board Priority	EVAC Planning Team
3	<ul style="list-style-type: none">Provide feedback on Partnership Activity draft conceptsPresent <u>Partnership Activity</u> draft concepts with EVAC feedback to Board for reviewRevise and further develop Partnership Activity draft concepts based on Board Feedback	EVAC Board Planning Team
4	<ul style="list-style-type: none">Provide Feedback on proposed Partnership ActivitiesConsider approval of proposed Work Plan with Partnership Activities	EVAC Board



Two Types of Activities

Partnership Activities	Potential Collaboration Activities
<p>A Partnership activity:</p> <ol style="list-style-type: none">1. Helps the City reach its Climate Action Plan and Energy Vision for 2040 goals,2. Initiates an action that would not happen absent the Partnership,3. States roles for the City and at least one utility, and4. Identifies a lead Partner.	<p>The Partners may identify certain individual Partner activities that clearly advance the City's climate and energy goals and may become areas of future collaboration.</p> <p>Previously existing and/or new utility programs near deployment may be considered for this section with a planned collaborative effort to leverage the Partners' resources.</p> <p>These collaboration items may fully develop and become priority initiatives of the Clean Energy Partnership, turning into Partnership activities.</p>

Adopted by Board on Dec. 19, 2017. Priority will be given to accomplishing and reporting on Partnership activities over the course of a work plan timeline.

“Partnership Activity” draft concepts under development

Energy Efficiency	CAP Link*
<p><u>Study & Act on High Residential Gas Usage</u>: Conduct a research effort to identify high residential natural gas users and the contributing factors of high usage. Develop and pilot individually customized strategies and more accessible marketing materials to dramatically increase residential energy efficiency with a focus on building envelope upgrades.</p>	<ul style="list-style-type: none"> • 15% EE in Res Bldgs by 2025 (Goal) • 75% of homes have energy retrofit by 2025 (Strategy)
<p><u>Align Benchmarking Data with Utility EE Resources</u>: Create a pilot commercial office building sector cohort to realize significant energy conservation by targeted and measurable outreach efforts to buildings with the highest energy use intensity <u>and</u> highest energy use.</p>	<ul style="list-style-type: none"> • 20% EE in C/I Bldgs by 2025 (Goal)
<p><u>Pursue City Facilities “Performance Path”</u>: Pursue new pilot “Performance Path” to Energy Efficiency for City facilities by providing discrete bundles of service according to progression in energy management.</p>	<ul style="list-style-type: none"> • 1.5% annual reduction in City facility GHGs (Goal) • 20% EE in C/I Bldgs by 2025 (Goal)

*All activities drive toward overall community-wide GHG emissions reduction goals



Feedback on Energy Efficiency Partnership Activity concepts

EVAC

- Item #1: Emphasize different strategies for different building types – focusing primarily on building envelopes may preclude action in multifamily buildings. Set target for how many high NG users will receive customized interventions.
- Item #2: The item should include an action component, not just targeted outreach and discussion.
- Item #3: More information needed to understand the program design and expected outcomes.

Board

- What additional feedback and comments do you have?

“Partnership Activity” draft concepts under development

Renewable Energy	CAP Link*
<p><u>Conduct Electric Vehicle Infrastructure Pilot</u>: Conduct an Xcel Energy EV Infrastructure pilot with City fleet vehicles and maximize renewable electricity consumption based on actual and modeled renewable resource production.</p>	<ul style="list-style-type: none"> • City infrastructure is model of RE technology (Strategy) • Provide EV charging at City facilities (Strategy)
<p><u>Achieve 100% RE for City Enterprise</u>: Create a pathway for meeting the City’s 100% renewable electricity enterprise goal after the current Renewable*Connect tranche subscriptions expire while meeting the City’s priorities. Include a potential to expand citywide, helping to reach the community-wide goal.</p>	<ul style="list-style-type: none"> • Investigate large-scale RE for municipal government and/or residents. (Strategy)
<p><u>Align Low Income Solar*Rewards with 4D Criteria</u>: Add 4D NOAH participation as eligibility criteria to upcoming Low Income Solar*Rewards program with a focus on Minneapolis outreach and promotion.</p>	<ul style="list-style-type: none"> • 10% of electricity from local and directly purchased renewables by 2025 (Goal) • Citywide 100% RE Goal

*All activities drive toward overall community-wide GHG emissions reduction goals

Feedback on Renewable Energy Partnership Activity concepts

EVAC

- Item #1: Be more clear about the scope of what is being piloted and what it will lead to. Is the ultimate goal to create infrastructure for the City fleet or the broader community?
- Item #2: The ultimate goal should be to create an approach that will work community-wide.
- Item #3: In addition to Solar*Rewards qualification, consider a more comprehensive approach to address various barriers facing 4D NOAH buildings (financing, etc.).

Board

- What additional feedback and comments do you have?

“Partnership Activity” draft concepts under development

Inclusive Financing	CAP Link*
<p>***NOTE: The following definition of inclusive financing was adopted at the Q2 Board meeting:</p> <p><i>“Inclusive financing allows direct investment in resource efficiency upgrades on the customer side of the meter through an on-bill approach regardless of the customer’s income, credit score, or renter/owner status. Under this definition debt is not accrued by the customer.”</i></p> <p>Advocate for inclusive financing at the State Legislature and/or Public Utilities Commission, if inclusive financing is determined to be feasible and can reasonably favor customers.</p> <p>Develop an inclusive financing pilot project, if it is determined to be legally feasible and reasonable for the implementer and their customers.</p>	<ul style="list-style-type: none"> • 15% EE in Res Bldgs by 2025 (Goal) • 75% of homes have energy retrofit by 2025 (Strategy) • Develop tools to finance EE and RE retrofits that have low barriers to entry (Strategy)



Feedback on Inclusive Financing Partnership Activity concepts

Board

- What additional feedback and comments do you have?

Feedback on overall list of Partnership Activity concepts

EVAC

- More details will help make it easier to assess projects.
- Include near-term objectives (ie. % of actions taken in target sector) and an expected two-year project outcome that will lead into future work plans (ie. a plan for how successful programs and activities will be expanded).
- The work plan as a whole doesn't seem ambitious enough at the current level of detail provided. At least one item in each section should be expanded to have a broader reach and larger expected impact.

Board

- What additional feedback and comments do you have?



Work Plan Next Steps

- Hold two additional Energy Efficiency and Renewable Energy EVAC feedback sessions for deeper dive into concepts
- Revise and further develop Partnership Activity draft concepts based on Board and EVAC feedback
- Present proposed Partnership Activities to Q4 EVAC Meeting for final feedback
- Board considers approval of proposed Work Plan with Partnership Activities at Q4 Meeting



Adjourn



Supplemental Slides

CEP Board Priorities for the Next Work Plan

Description:

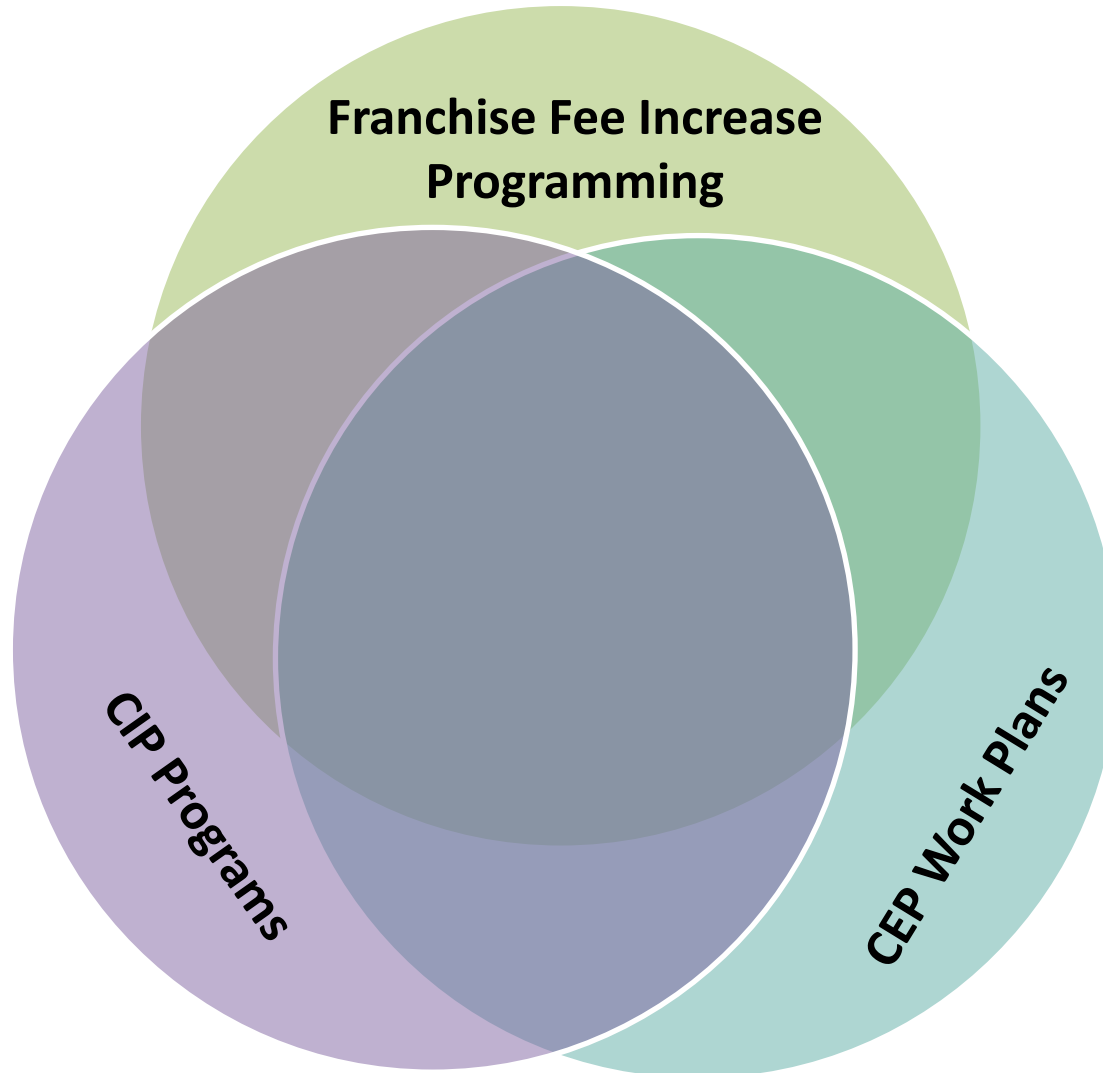
Priorities

- Lower Energy Consumption in all building sectors
- Make clean energy accessible through inclusive financing tools
- Make the City more sustainable and resilient through increased local renewable energy

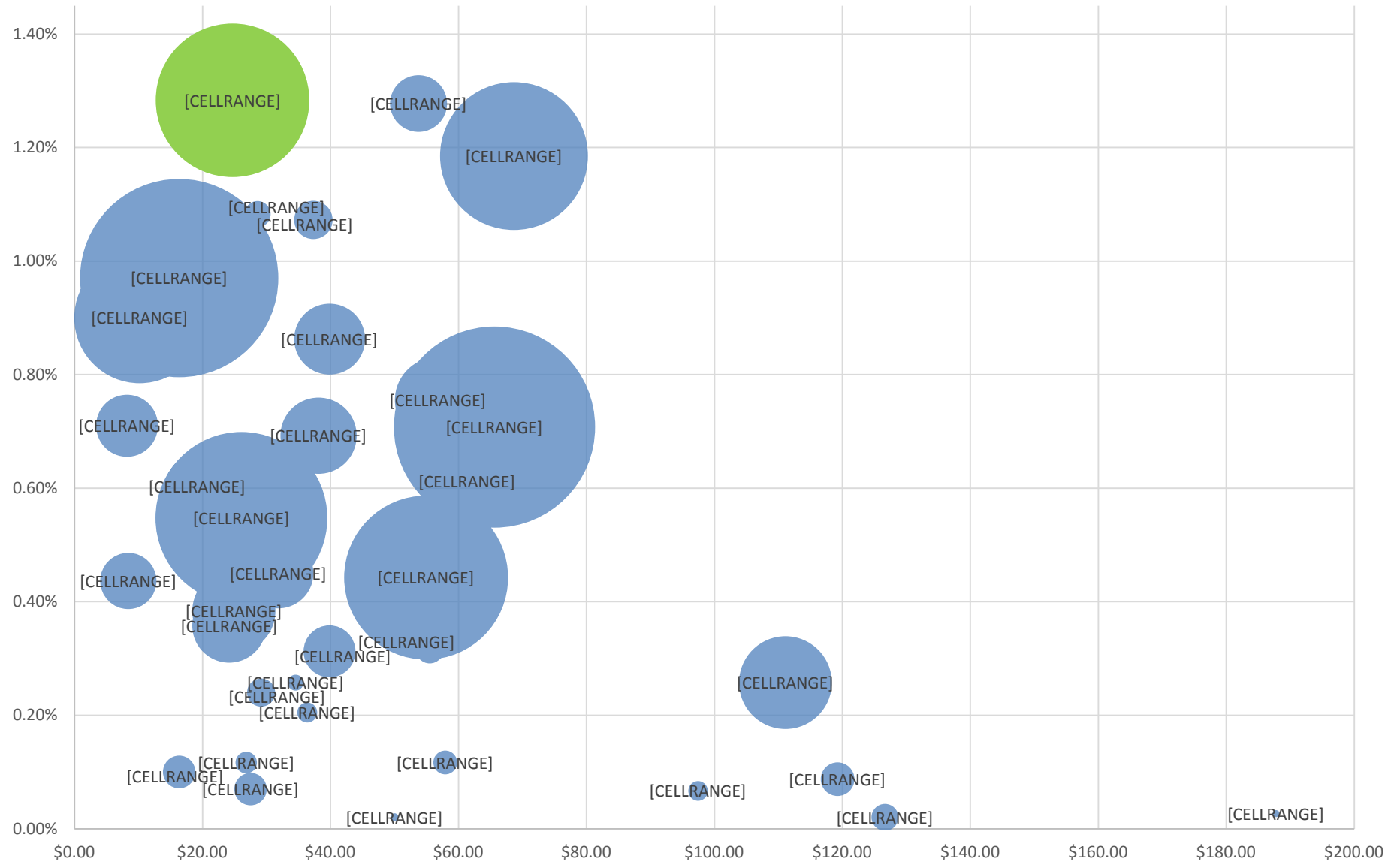
Approaches

- As a partnership, make requests of the State and PUC
- Consider ROI and Equity of Energy Efficiency efforts
- Leverage partners' respective strengths
- Clarify CEP roles and prioritize goals and activities

CEP Work Plan priorities and approaches approved on March 15, 2018.



2013-2016 Average Savings as a Percent of Sales (y); Average \$/Dth (x); Average Annual Dth Savings (size)

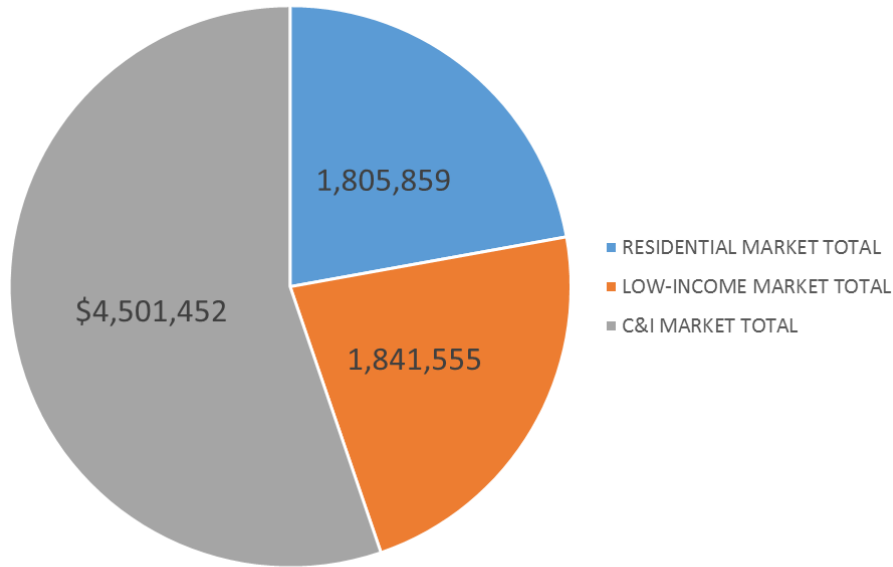


Minneapolis

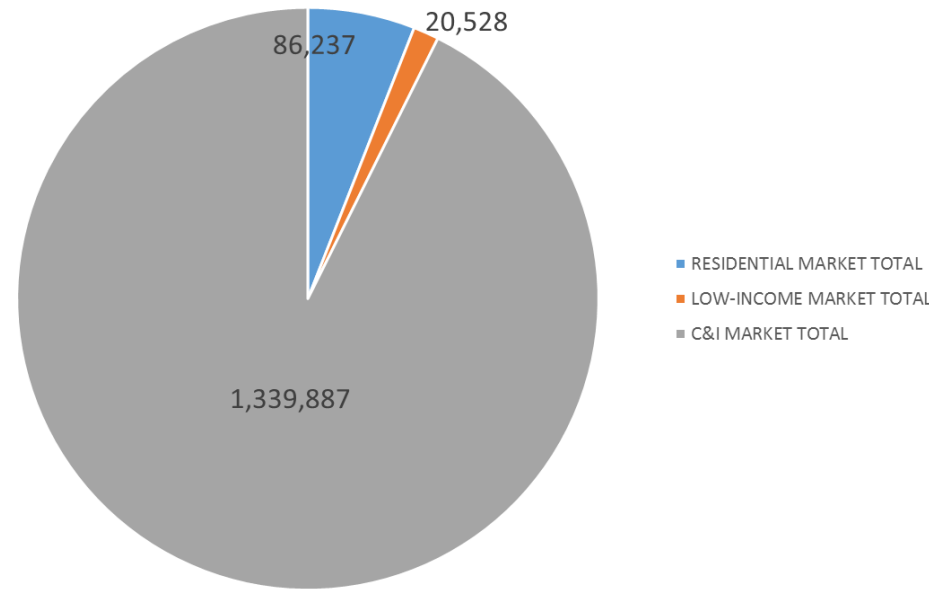
2017 CenterPoint Energy Conservation Improvement Program Results	Participants	Energy Savings (Dth)	Total Program Spending (\$)	Energy Savings/Participant
RESIDENTIAL MARKET				
Home Efficiency Rebates	5,264	37,441	936,015	7.11
DIY Home Efficiency	1,688	3,542	91,070	2.10
Home Insulation Rebates	242	6,739	163,092	27.85
Home Energy Reports	24,175	34,570	188,385	1.43
Home Energy Squad	599	2,869	378,479	4.79
High-Efficiency Home	20	403	21,547	20.13
New Home Construction Rebates	154	673	27,271	4.37
RESIDENTIAL MARKET TOTAL	32,142	86,237	1,805,859	2.68
LOW-INCOME MARKET				
Low-Income Weatherization	253	8,804	1,246,908	34.80
Low-Income Rental Efficiency	33	737	116,971	22.33
Low-Income Free Heating System Tune-Up	330	710	25,831	2.15
Non-Profit Affordable Housing Rebates	59	1,928	348,500	32.68
Low-Income Multi-Family Housing Rebates	37	8,349	103,346	225.66
LOW-INCOME MARKET TOTAL	712	20,528	1,841,555	28.83
COMMERCIAL & INDUSTRIAL MARKET				
Commercial Foodservice Equipment Rebates	111	13,291	\$158,218	119.74
C&I Heating and Water Heating Rebates	3,621	322,486	\$1,076,885	89.06
C&I Custom Rebates	12	934,321	\$2,401,117	77860.08
Natural Gas Energy Analysis	7	-		0.00
Energy Design Assistance	18	58,647	\$590,076	3258.15
Industrial Process Efficiency*	N/A	N/A	N/A	#VALUE!
C&I Training and Education				
Engineering & Certification Assistance	15	-	\$38,584	0.00
Recommissioning Study & Rebates	9	8,329	\$42,085	925.44
Multi-Family Building Efficiency	30	2,424	\$178,596	80.79
Industrial Process Steam Trap Audit	-	-		

2017 Xcel Energy Conservation Improvement Program Results	Participants	Energy Savings (kWh)	Total Program Spending (\$)	Savings/Participant
RESIDENTIAL MARKET				
Air Conditioning	1,354	490,551	\$1,744,544	362.30
Efficient New Home Construction	20	21,373	\$5,434	1,068.65
Home Energy Audits	121	N/A	\$24,655	
Home Energy Squad	568	523,955	\$130,675	922.46
Home Insulation Rebates	2	10,907	\$207	5,453.50
Refrigerator Recycling	226	198,943	\$38,728	880.28
Residential Demand Response	640	3,082	\$132,000	4.82
Residential Heating	1,202	895,293	\$137,570	744.84
Smart Thermostat	45	N/A	N/A	
RESIDENTIAL MARKET TOTAL	4,178	2,144,104	\$2,213,813	1,348.12
LOW-INCOME MARKET				
Low Income Home Energy Squad	114	86,626	\$32,471	759.88
Home Energy Savings Program	309	98,011	\$298,776	317.19
Low Income Multi-Family	150	223,634	\$283,530	1,490.89
LOW-INCOME MARKET TOTAL	573	408,271	\$614,777	855.99
COMMERCIAL & INDUSTRIAL MARKET				
Commercial Efficiency	117	5,757,601	\$1,744,544	49,210.26
Computer Efficiency	1	1,088	\$105	1,088.00
Cooling	132	1,554,548	\$328,838	11,776.88
Custom Efficiency	5	780,578	\$123,559	156,115.60
Data Center Efficiency	17	5,262,366	\$518,981	309,550.94
Efficiency Controls	15	3,038,693	\$317,395	202,579.53
Energy Design Assistance	17	3,916,057	\$1,409,081	230,356.29
Energy Efficient Buildings	2	305,425	\$165,774	152,712.50
Fluid System Optimization	13	653,551	\$93,259	50,273.15
Foodservice Equipment	9	171,838	\$10,534	19,093.11
Heating Efficiency	2	2,709	\$293	1,354.50
Interrupted Rates	34	30,248	\$206,579	889.65
Lighting	943	14,712,704	\$5,718,073	15,602.02
Lighting One Stop	280	9,451,085	\$2,505,662	33,753.88

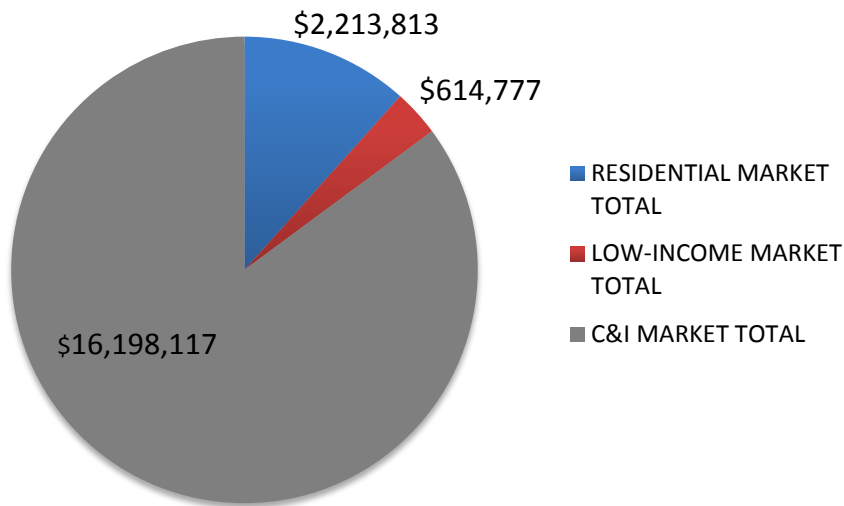
CenterPoint Energy Conservation Improvement Program
2017 Spending in Minneapolis



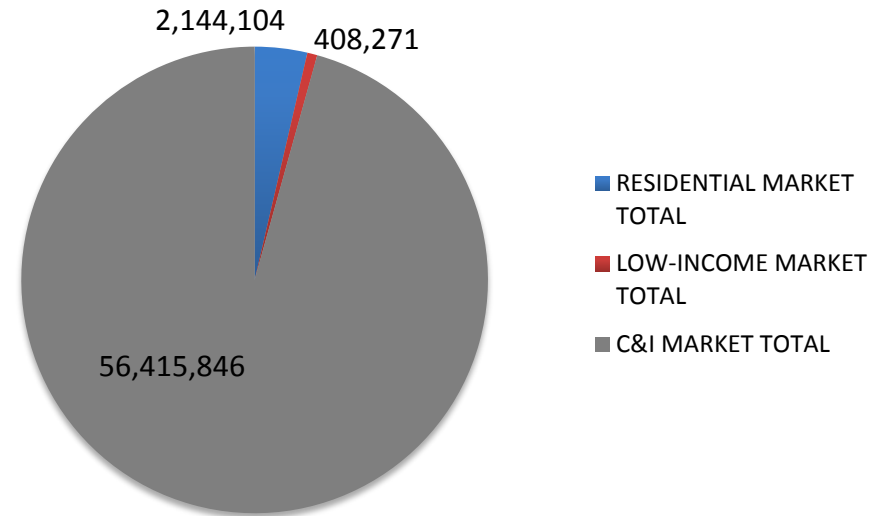
CenterPoint Energy Conservation Improvement Program 2017 Energy
Savings in Minneapolis



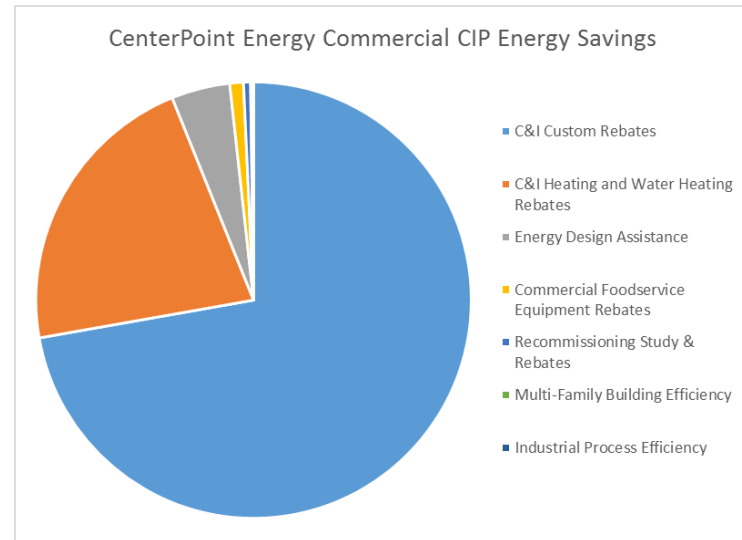
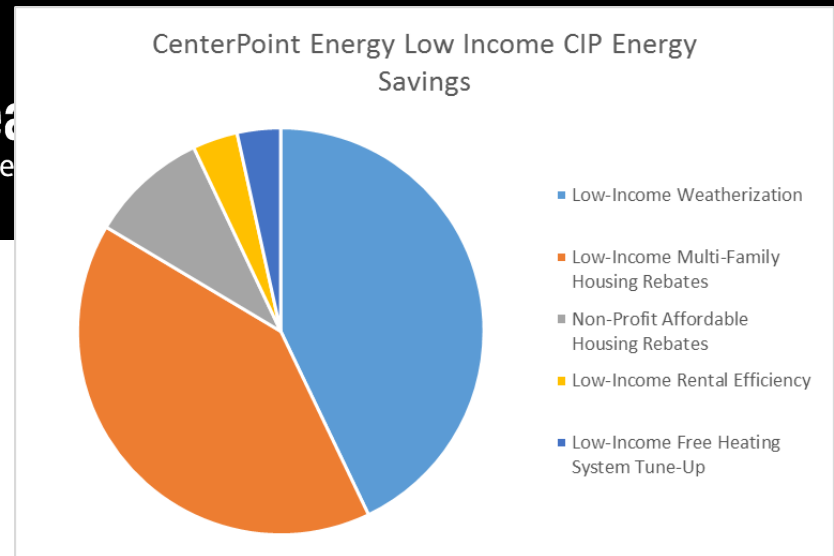
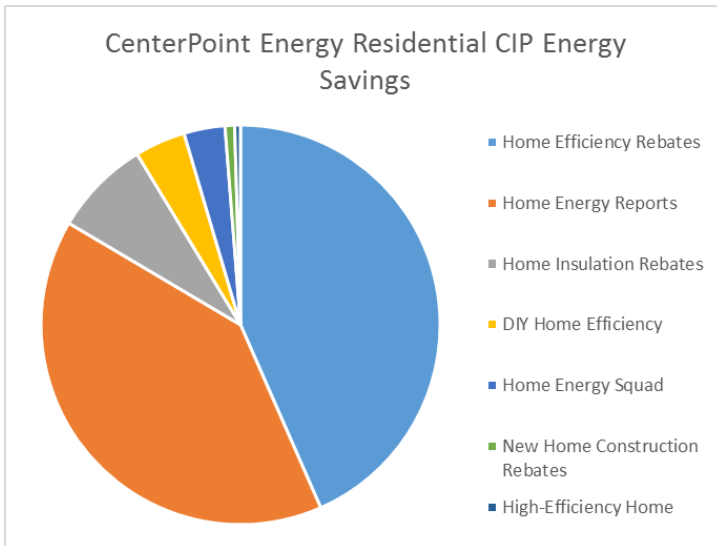
Xcel Energy Conservation Improvement Program 2017 Spending in Minneapolis



Xcel Energy Conservation Improvement Program 2017 Energy Savings in Minneapolis

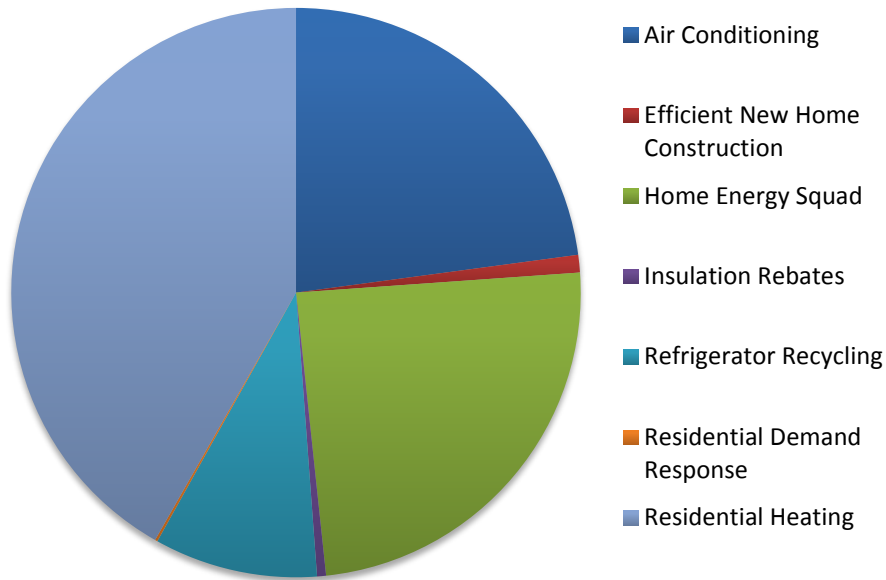


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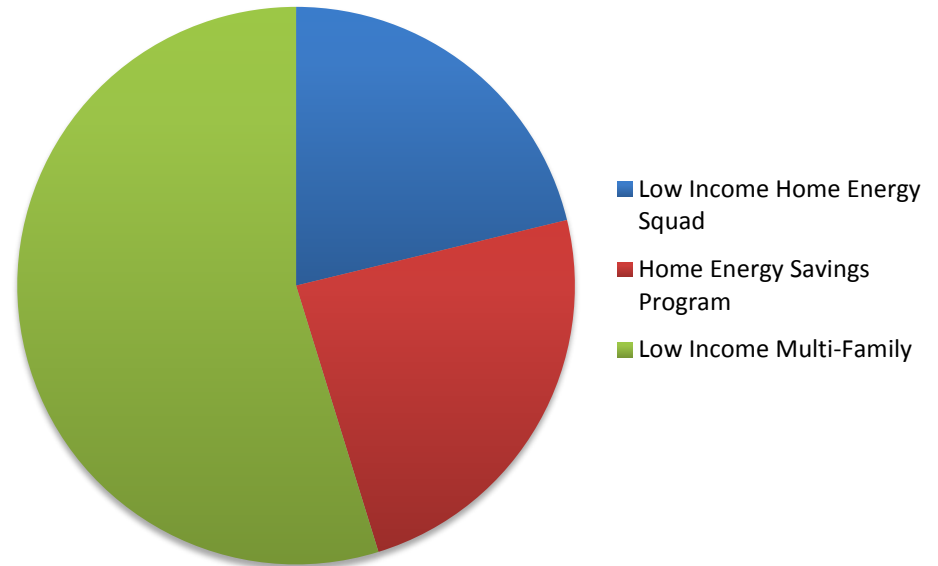


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Xcel Energy Residential CIP Energy Savings



Xcel Energy Low Income CIP Energy Savings



Xcel Energy Commercial CIP Energy Savings

