Leadership in Sustainability

Annual Report

July 2009 - June 2010

Prepared by: Progressive Associates, Inc.

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Introduction:

Saint Paul RiverCentre (which includes the Roy Wilkins Auditorium) and the Xcel Energy Center have a mission to become regional leaders in sustainability. The facilities and their partners believe that being a leader means adopting and adhering to best practices for sustainable operations. Many of these practices are outlined by third-party standards such as LEED (Leadership in Energy and Environmental Design) and Energy Star (a program of the Environmental Protection Agency). Standards such as these are being used as the yardstick to set goals and measure progress.

The facilities partnered with Progressive Associates to coordinate their overall efforts; a process to not only create but also execute a strategic path of leadership in sustainability. This process began with a benchmarking of the existing operations to use as a point of reference in designing goals and tracking future progress quantitatively. The results of the benchmark assessment revealed that short term, high impact goals were needed to shape the initiatives that would be implemented.

The purpose of this report is to show the results achieved by the facility and its partners in the first year.

Overview:

The Partners: Saint Paul RiverCentre initiated this process in April 2009 by contracting for the benchmark assessment. The results highlighted that since operational processes, infrastructure and staff were shared with Xcel Energy Center, it would be most effective to implement a campus-wide strategy. The sustainability effort therefore evolved into a joint partnership between Visit Saint Paul (formarly the Covention and Visitors Authority), Saint Paul Arena Company (who manages Saint Paul RiverCentre, Xcel Energy Center, Roy Wilkins Auditorium) and the Minnesota Wild. This endeavor and partnership was also embraced by the on-site food vendors: Wildside Caterers, Levy Restaurants and Centerplate Concessions.

The Benchmark Assessment: Data was collected on the facilities' waste stream, energy use, carbon footprint and water consumption. Designed to be a snapshot of 'normal' operations, the assessment period was chosen as July 2007-June 2008. This was the most recent full-year timeframe that excluded the Republican National Convention (September 2008). The RNC was not only highly irregular for the campus but also some data required for benchmarking was unavailable.

The Initiatives: It was decided that the campus recycling program was the furthest from 'leadership' standards, therefore waste and recycling became the first priority. The second initiative for year one focused on carbon footprint and energy use, two closely related elements that were tied to a single set of goals. The waste program launched in September and retrofits for the energy program began in Jaunuary.

The Report: Section 1 provides a summary of the overall strategy and describes the initiatives that are linked to it. There is also a glossary of common terminology. Sections 2 and 3 describe the Waste and Energy initiatives, respectively, in further detail. Goals, program highlights and results are summarized on the first page of each section. Subsequent pages provide further detail on the current results in comparison with benchmark data showing progress and highlighting challenges.

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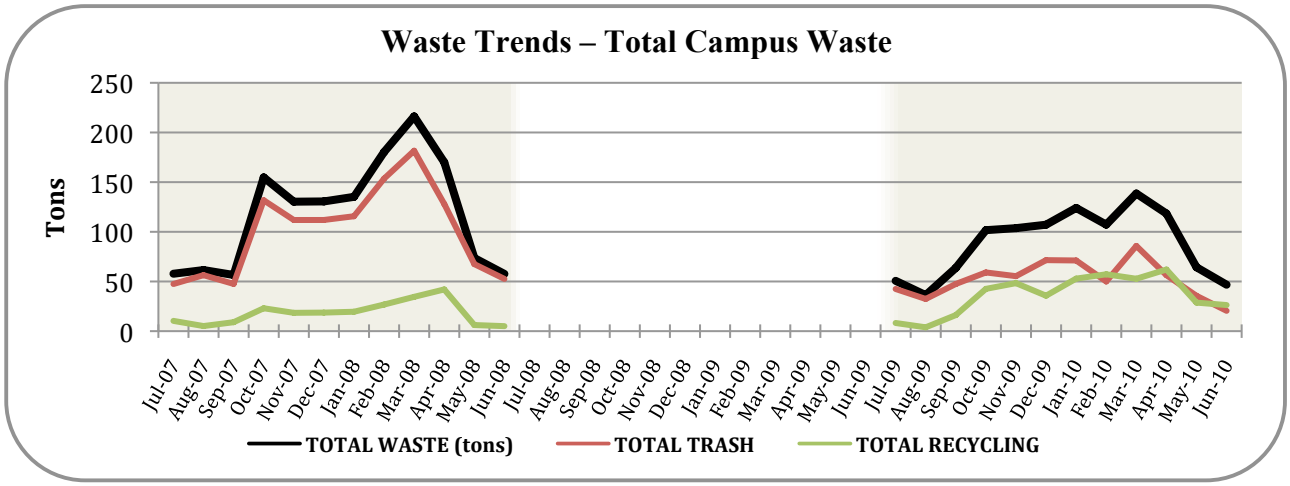
Waste:

The benchmark assessment uncovered that the facilities generated 2.8 million pounds of waste per year and the recycling rate was 15%. The '50-50 in 2' program was created to cut the trash in half and increase the recycling rate to 50%. To reach this goal, facility leadership decided that two years was an ambitous yet achievable timeframe. Year one focused on 'waste out' (meaning the handling of existing waste) which involved redesigning infrastucture, adding new streams of recycling and designing new collection practices.

Year two begins with a focus on 'waste in' (controlling items that end up in the waste stream) as campus wide purchasing is addressed; read more on green purchasing below. As the process continues, focus will also remain on efficient waste handling and general reduction. The graph below shows annual progress from the benchmark year to current, displaying that overall waste as well as trash have gone down as recycling increased.

See Section 2 for more details on our Waste Initiative.

Special Acknowledgment: The facility and its partners have received recognition for their first year of effort from the City of Saint Paul, as recipients of the *Sustainable Saint Paul Award for Waste Reduction & Recycling*. They also received an *Excellence in Public Service* award from Midwest Society of Association Executives and Honorable Mention from Venues Today Magazine for being a *Steward of Sustainability*.



Green Purchasing:

The facilities have developed a 'Green Purchasing Playbook' for their operations, which establishes guidelines and policy for buying environmentally preferable products. The categories in the playbook include operations, office products, food service, construction, capital projects, engineering, and information technology. Standards such as LEED, Energy Star, WaterSense, Forest Stewardship Council and Green Seal have been used as the basis for these guidelines and the playbook contains references to where staff can find more information about each standard. In addition, many products have been given 'acceptable' and 'exceptional' criteria, so purchasers can seek out products above the minimum standard when available.

Purchases across these categories will be tracked, as with all other initiatives, to determine how successfully the facilities are switching to 'green' alternatives. Management is also seeking feedback from staff, so if green products are not chosen they can understand whether that choice was related to price, availability, or specification.

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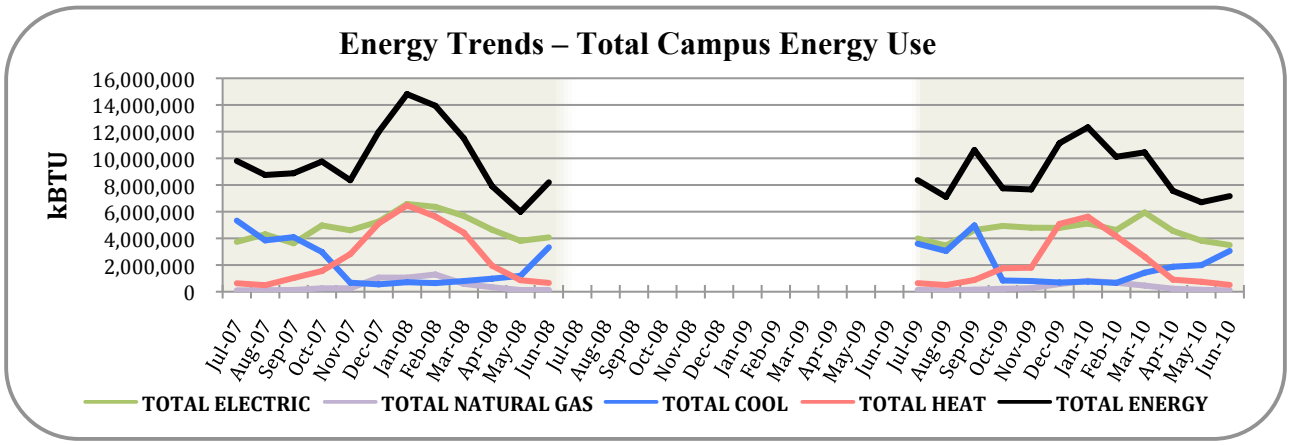
Energy:

The benchmark energy analysis showed that the facilities were operating at slightly above 'average' for this region, and that the carbon footprint of direct operations was almost exclusively tied to energy use. The goal of '80-20 in 3' was created to drastically cut carbon emissions by 80% while bringing operational efficiency in line with LEED standards. As with waste, an ambitous but achievable timeline was established for reaching this goal: three years.

In the first half of the program, efforts are being focused heavily on the direct reduction of energy use and carbon footprint. A three-year plan has been established for performing retrofits to lighting, HVAC and the building envelope,. A comprehensive energy efficiency plan is in development, which will create new standards for building operations. As the energy use is being reduced in the facilities, further reductions in carbon footprint will be achieved through alternative energy & carbon offset purchases. The graph below shows the trend of decreased energy use in the first year.

See Section 3 for more details on the Energy Initiative.



Water:

The benchmark analysis showed that the facilities were using water at a rate of 9.4 gallons per visitor. This includes all water used in kitchens, on the grounds and by ice-making equipment. Thus far water use at the facilities does not have a specific goal; capital for conservation projects is currently being used to fund the waste and energy initiatives. However, much of the campus is already using low-flow and self-closing fixtures, and water use will continue to be tracked on a monthly basis.

Since the benchmark year, water use has been significantly reduced, even without a specific initiative around it. For the past year, the facilities have used water at a rate of 7.0 gallons per visitor, which is a 25% reduction overall. This change has largely been seen at the Xcel Energy Center, although RiverCentre's usage has also gone down.

With broad reaching focus on sustainability, opportunities for water conservation will always be considered. The facility is currently in the process of installing two new high-efficiency commercial dishwashers that will significantly reduce water requirements in the kitchens. The new green purchasing playbook calls for any fixtures that are replaced to be upgraded to low-flow versions that meet the EPA's WaterSense program standards. The graph on the next page shows how water cosumption has fallen over the past three years.

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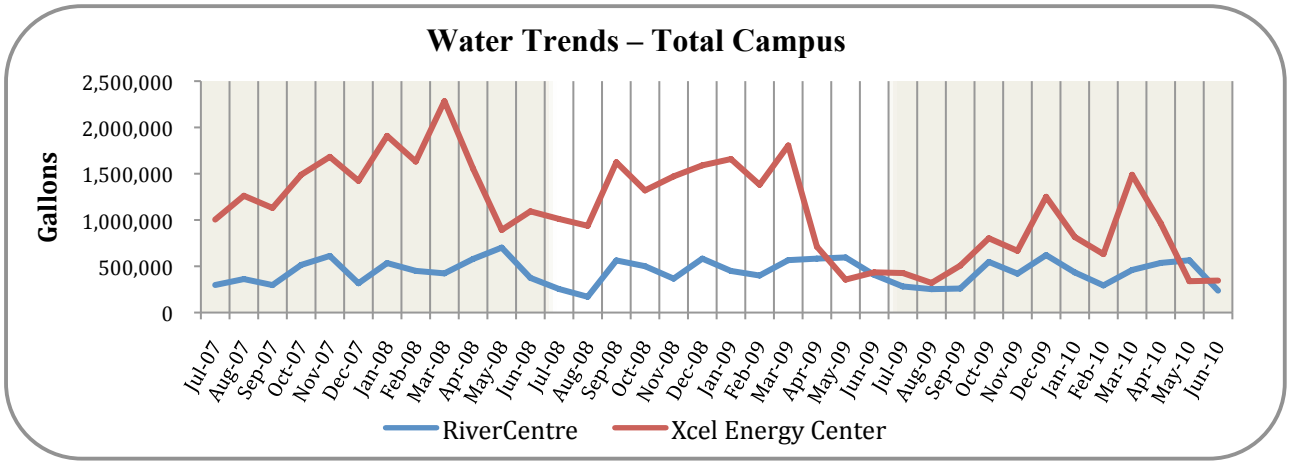

Common Terminology:

GENERAL

- Sustainability: meeting the needs of today without sacrificing the needs of the future

WASTE INITIATIVE

- Waste: all materials that are leftover and no longer useful to the facility
- Trash: any unwanted or undesirable materials
- Commingle: glass, plastic bottles and cans
- Compost: Food waste and other organic materials that biodegrade in nature
- Total Recycling: All items diverted from the trash

ENERGY INITIATIVE

- Energy Use Index (EUI): total energy used per square foot by a facility over 12 months
- Carbon Footprint: measure of greenhouse gases emitted due to a facility's operations
- Carbon Dioxide Equivalent (eCO2): the global standard unit of measure for greenhouse gases
- Carbon Offset: voluntarily offsetting carbon emissions by investing in renewable energy, for example.
- Retrofits: replacing existing light fixtures and/or upgrading to newer, more efficient technologies
- Peak: period of highest energy consumption
- Demand: client's share of energy generation, transmission & distribution costs (based on peak usage)
- Kilo British Thermal Unit (kBTU): the global standard unit of measure for normalizing energy use
- Renewable Energy: energy that comes from natural resources such as sunlight, wind, or rain

50-50 in 2
reducing trash – recycling more

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Waste Initiative: Summary

The Program:

GOAL: Reduce the campus wide trash by 50% = 1,205,890 pounds of trash per year

GOAL: Increase the campus wide recycling rate to 50% from benchmark rate of 15%

TIME: 2 years (ending June 30, 2011)

The Process:

1. Added multiple new recycling streams: Composting, Construction, Pallets, Plastic Wrap
2. Developed new and consistent tracking methods with quarterly reporting
3. Redesigned internal infrastructure: New compactors and automated machinery
4. Added over 280 new collection systems to aid visitors and staff in waste sorting
   (Note: Over 95% of the new bins contain recycled content)
5. Established a series of internal checks and stop-gaps to reduce contamination
   (Note: These included color coded bags and holding areas for waste inspection)
6. Educated staff and visitors on new processes and practices

The Results (Year 1):

- Year one trash reduction: **48% = 1,156,560 pounds**
- Annual recycling rate: **41% up from 15%**
- Annual costs: **down $11,251**

Recycling Volume Highlights

- Cardboard & Paper: 156 tons (311,980 pounds)
- Compost: 122 tons (243,320 pounds)
- Cans/Bottles: 93 tons (185,560 pounds)
- **Total Recycling: 435 tons (doubled from benchmark)**

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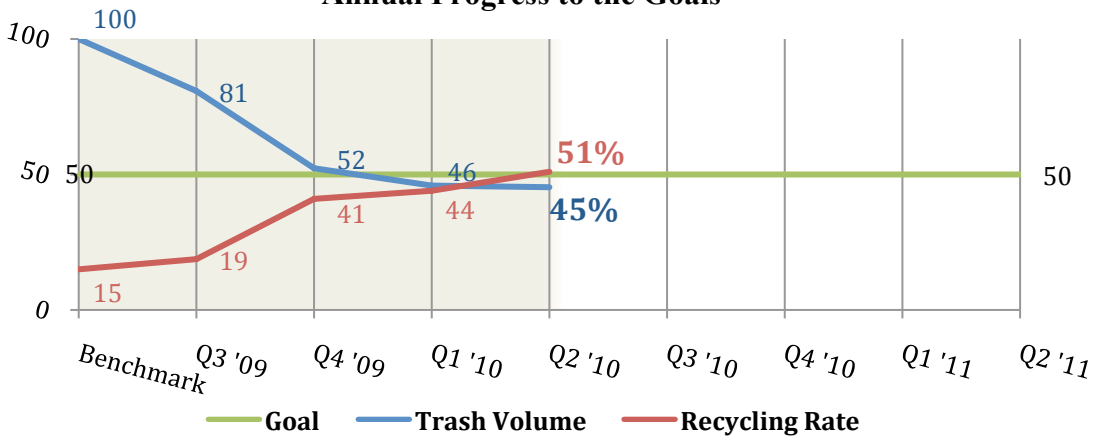
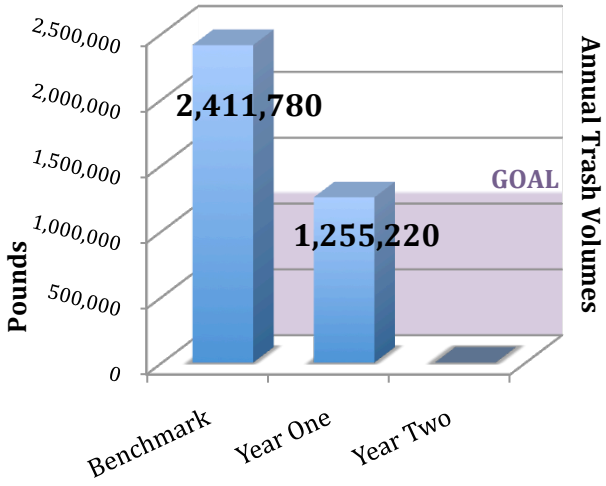
Waste Initiative: Goal Tracking



	Start (Benchmark)	Q3 2009	Q4 2009	Q1 2010	Q2 2010	Annual Change	YTD Results
Trash Volume	100%	81%	52%	46%	45%	**-48%**	**52%**
Recycling Rate	15%	19%	41%	44%	51%	**+26%**	**41%**

Progress Description:

- **Trash Reduction:** Trash was reduced by 1,156,560 pounds - A reduction of 48% from the benchmark. This total was just 49,330 pounds short of reaching the goal in the first year.
- **Recycling Rate:** The first year rate was 41%, more than doubling the benchmark rate of 15%. In the last quarter of the year (Q2 2010) the 3-month average reached 51% - surpassing the goal for the first time.
- **Progress:** Based on the success of this program in the first year, if trends continue both goals will be reached on time or ahead of schedule.



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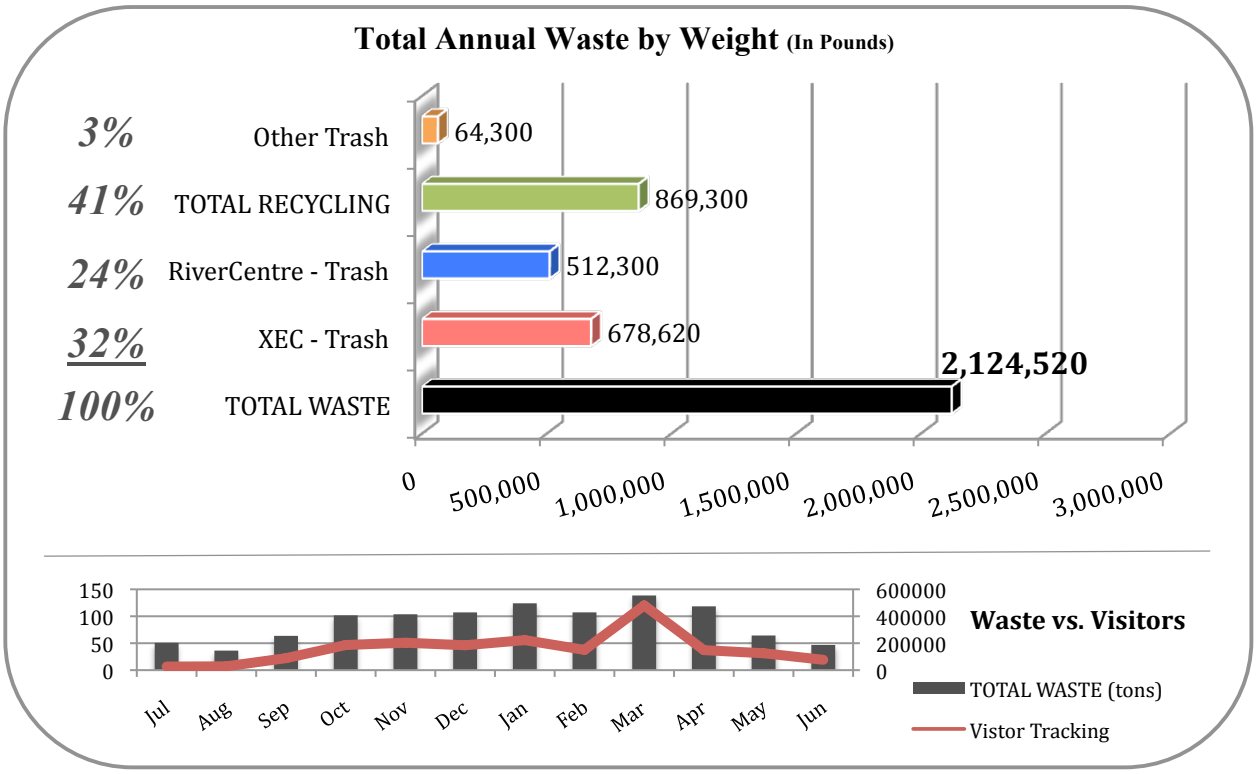
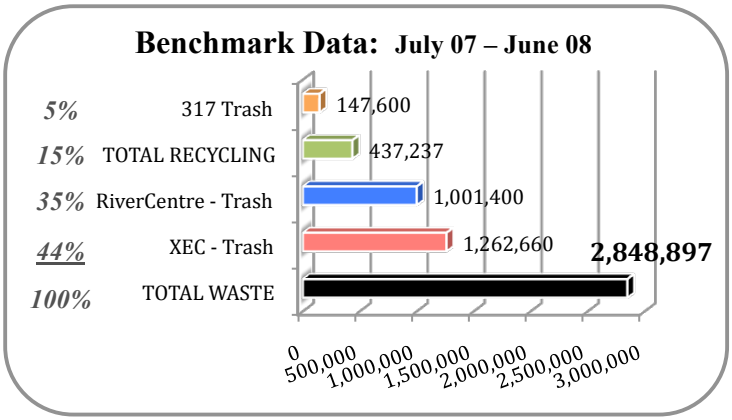
Waste Initiative: Volume Analysis





Key Take Away Points:

- Trash volumes for both facilities have been nearly cut in half.
- Total recycling has increased by 432,063 pounds – almost doubling the benchmark quantity.
- The weight of Total Waste has decreased by 724,377 pounds – which is a reduction of 25%.

NOTE: 'Other Trash' includes 317 trash before new systems took effect, plus any extra dumpsters used for special events and the non-recycled portion of construction waste pickups.

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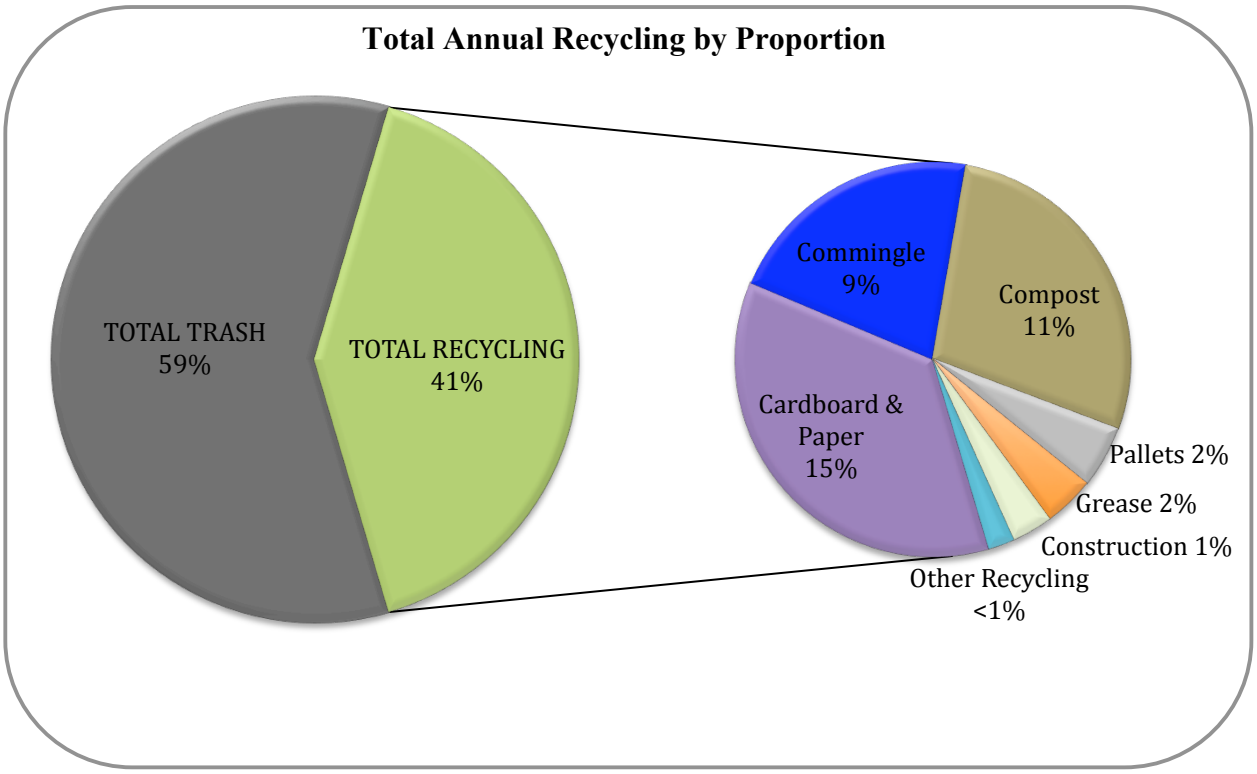
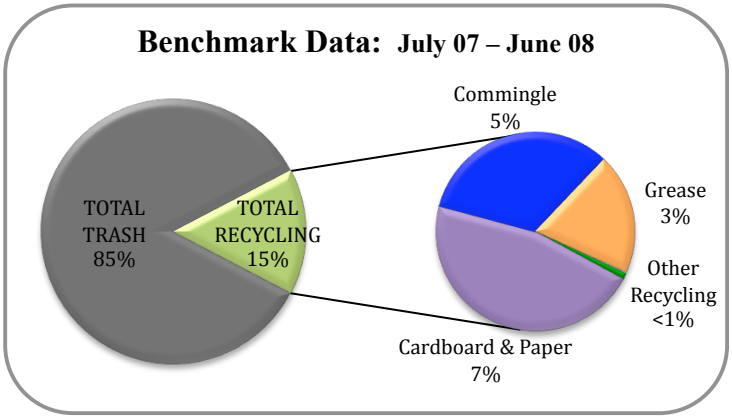
Waste Initiative: Recycling Analysis





Key Take Away Points:

- Existing streams of recycling have all shown increases except grease, for which usage practices have changed.
- The second-largest recycling stream this year was compost - a new item that began collection in October 2009.
- Other notable additions are the tracking of pallets and the recycling of construction waste.
- 'Other recycling' consists of metal, light bulbs and durable goods donations.

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reducing trash – recycling more

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Waste Initiative: Tables

Total Annual Recycling Breakdown

	Q3 2009	Q4 2009	Q1 2010	Q2 2010	YTD Totals
Cardboard & Paper	12.9	53.0	55.5	34.5	**156.0**
Commingle	6.6	27.0	37.8	21.4	**92.8**
Compost	0.0	32.9	43.9	44.8	**121.7**
Pallets	3.2	8.6	8.4	1.9	**22.1**
Kitchen Grease	1.5	4.5	9.8	2.3	**18.1**
Construction	0.0	0.0	5.8	9.0	**14.8**
Plastic Wrap	0.0	0.0	0.0	0.0	**0.0**
Other Recycling	4.0	0.6	1.6	3.1	**9.3**
Total Recycle	**28.2**	**126.6**	**162.9**	**117.0**	**434.7**
RiverCentre - Trash	71.3	77.5	55.3	52.0	**256.2**
XEC - Trash	32.8	104.3	149.3	53.0	**339.3**
Other Trash	0.0	4.1	2.3	7.5	**13.9**
317 Trash (Other)	18.2	-	-	-	**18.2**
Total Trash	**122.3**	**185.9**	**206.9**	**112.4**	**627.6**
Total Waste	**150.5**	**312.5**	**369.8**	**229.4**	**1062.2**
RECYCLE RATE	18.8%	40.5%	44.0%	51.0%	**40.9%**

Waste Tracking - Month by Month

	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
Total Waste (lbs.)	101,320	72,500	127,260	203,300	207,360	214,320
Total Trash (lbs.)	84,900	64,800	94,960	118,180	110,720	142,960
Recycling Rate	16%	11%	25%	42%	47%	33%
Benchmark Rate	18%	8%	16%	15%	14%	14%

	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10
Total Waste (lbs.)	248,060	214,440	277,080	236,800	128,580	93,460
Total Trash (lbs.)	142,300	99,980	171,600	112,740	71,160	40,920
Recycling Rate	43%	53%	38%	52%	45%	56%
Benchmark Rate	14%	15%	16%	25%	8%	9%

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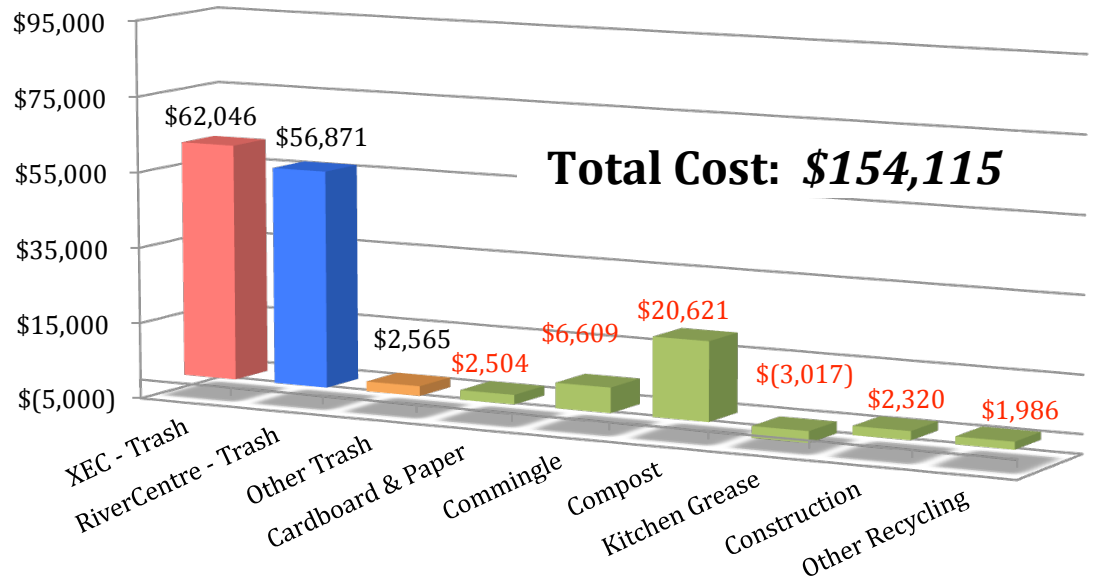
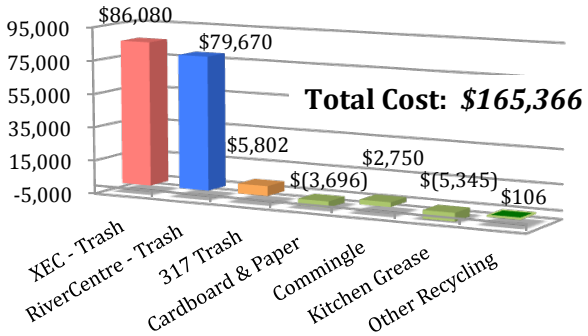
Waste Initiative: Cost Analysis

Annual Waste Handling Cost Breakdown



* Values shown in red are an indication of an increase from the benchmark period

Benchmark Data: July 07 – June 08



Current cost for handling trash = $193/ton
(total trash costs / total tons of trash)

For handling recycling = $72/ton
(total recycling costs / total tons of recycling)

Key Take Away Points:

- Annual costs are down by $11,251, even with added infrastructure costs and a decrease in recycling revenue for grease.
- Higher recycling rates led to greater cost savings. As the trend to higher recycling continues, more savings are expected.
- The largest cost increase was for compost, which is a new stream & the only recyclable subject to disposal fees.
- The cost of cardboard & paper recycling increased due to rental charges and pick up fees. This process reduced labor costs.

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reducing trash – recycling more

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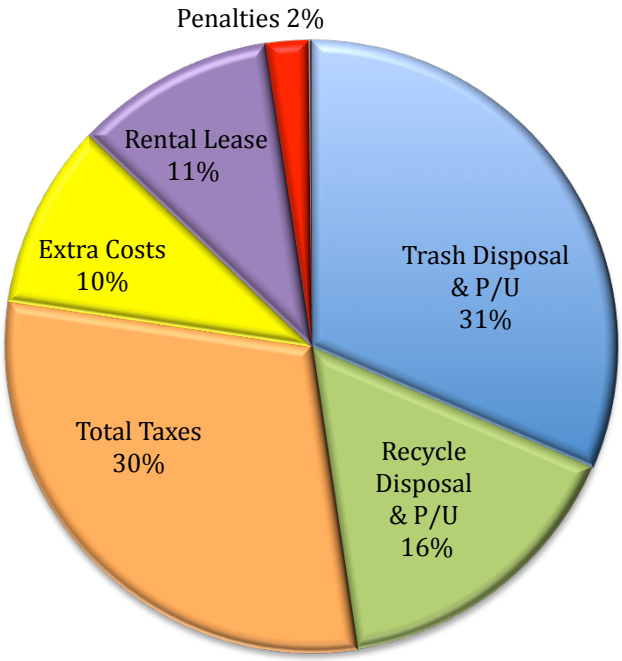
Waste Initiative: Cost Analysis

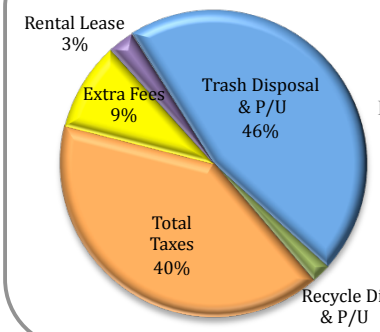
Annual Waste Handling Cost Distribution



Trash Disposal & P/U =	$52,463
Total Taxes =	$49,592
Recycling Disposal & P/U =	$26,974
Rental & Lease Fees =	$17,546
Extra Costs =	$16,214
Penalties =	$3,787
Recycling Rebates =	($12,249)
Trash Credits =	($212)
TOTAL COSTS	$154,115

* Values shown in red are an indication of an increase from the benchmark period

Benchmark Data: July 07 – June 08



Trash Disposal & P/U =	$79,902
Total Taxes =	$70,356
Recycling Disposal & P/U =	$3,521
Rental & Lease Fees =	$4,725
Extra Costs =	$16,319
Recycling Rebates =	($9,724)
TOTAL COSTS	$165,366

Key Take Away Points:

- The breakdown has shifted significantly.
- 'Disposal & Pickup' fees are down $3,986.
- 'Rental Fees' are up $12,821 (as expected).
- 'Taxes' have been reduced by $20,764 and will continue to show more savings as recycling increases.
- 'Penalties' are a new cost that can be eliminated with new processes.
- 'Extra Costs' are mostly due to fuel surcharges assessed by the waste haulers.

80-20 in 3
reducing carbon – increasing efficiency

Energy Initiative: Summary

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The Program:

GOAL: Reduce the annual facility wide carbon footprint by 80%

GOAL: Make our buildings 20% more efficient than average

TIME: 3 years (ending June 30, 2012)

The Process:

1. Carbon footprint is based on direct operations: energy use & fuel consumption.
2. Efficiency is based on facility EUI (Energy Use Index), or annual energy used per square foot. 'Average' is based on CBECS (Commercial Buildings Energy Consumption Survey). The average EUI is 101.7 kBTU/ft^2 for this region, so the goal is to use 20% less than that or 81.3 kBTU/ft^2.
3. Efficient Equipment: A three-year plan has been developed to upgrade inefficient lighting, HVAC & structural components. Some upgrades are already underway.
4. Efficient Operations: Standards are being created for building settings and procedures to operate as efficiently as possible while still delivering an excellent guest experience.
5. Carbon Reduction: In addition to reductions from efficiency, a large solar thermal array will be installed on the roof of RiverCentre in 2010/2011. As the efficiency target is reached, further reductions will be made through the purchase of carbon offsets.

The Results (Year 1):

- Total carbon footprint reduction: **19%**
- Saint Paul RiverCentre: **17.9%** more efficient than average
- Xcel Energy Center: **17.3%** more efficient than average
  - Total facility energy use: **down 11%**
  - Annual costs: **down $7,609**

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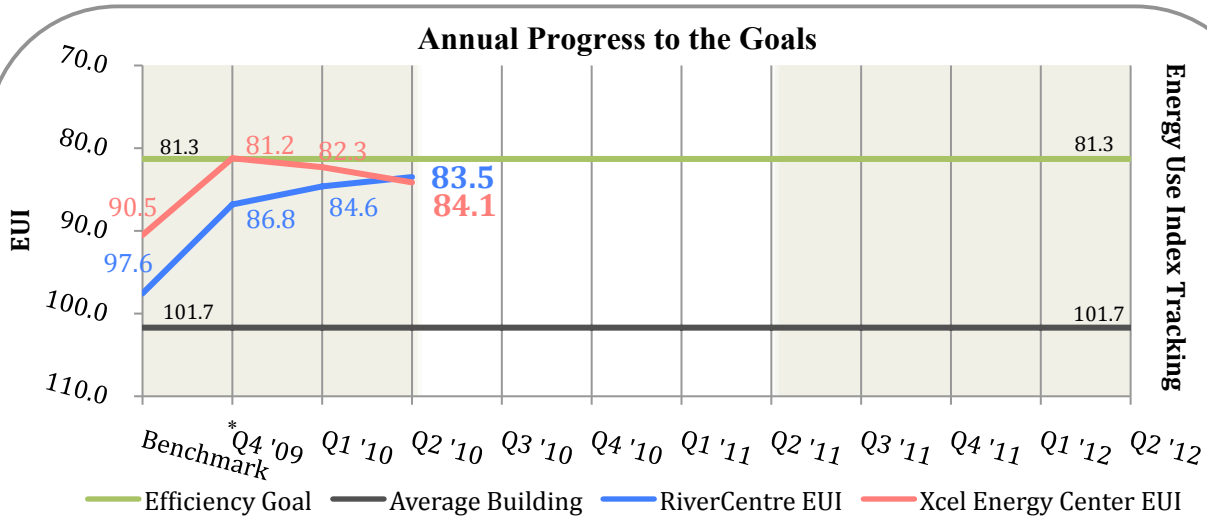
Energy Initiative: Goal Tracking



* EUI is a 12 month calculation. Based on the Republican National Convention - data for Q3 2009 was incomplete.

	Bench	Q4 '09	Q1 '10	Q2 '10
RiverCentre EUI	97.6	86.8	84.6	83.5
% More efficient than avg ->	4.1%	14.6%	16.8%	**17.9%**
Xcel Energy Center EUI	90.5	81.2	82.3	84.1
% More efficient than avg ->	11.0%	20.1%	19.1%	**17.3%**

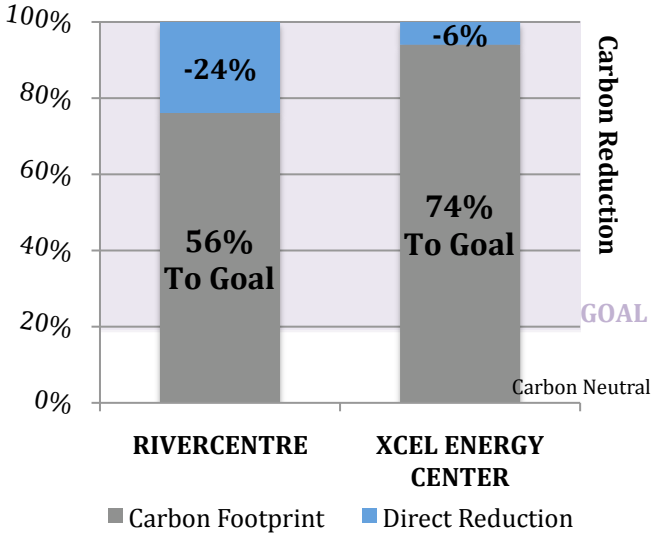
Full Facilty

17.6%

More Efficient Than Average

Progress Description:

- Both buildings have reduced carbon footprint and increased efficiency.
- RiverCentre has made more progress, reducing carbon footprint by 24% and raising the efficiency rating from 4% to 18%.
- Xcel Energy Center had less distance to go on efficiency but rose from 11% to 17.3%
- The first year shows the challenge of not only reaching the goal but also maintaining it. These results are ahead of projections, allowing earlier focus on carbon offsets.



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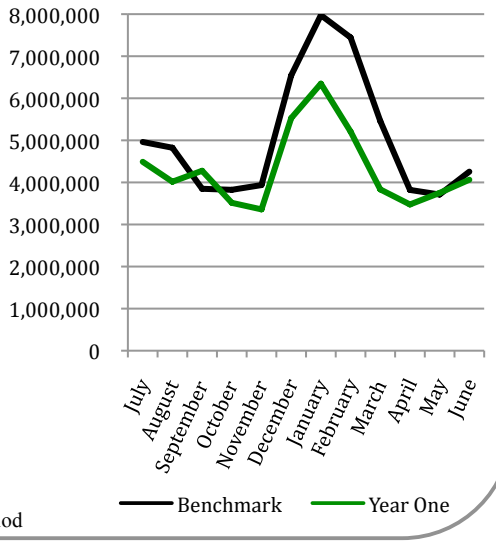
Energy Initiative: Tables

RiverCentre – Total Energy Use Comparison (in kBTU)

Month	Benchmark	Year One	Change	Temp +/-
July	4,961,085	4,490,112	-9%	-6
August	4,824,583	4,016,707	-17%	-2
September	3,848,638	4,277,128	11%	2
October	3,824,042	3,514,649	-8%	-11
November	3,936,705	3,358,977	-15%	8
December	6,543,195	5,527,068	-16%	1
January	7,975,419	6,347,407	-20%	0
February	7,445,638	5,208,982	-30%	5
March	5,460,057	3,833,995	-30%	13
April	3,821,337	3,475,631	-9%	11
May	3,712,152	3,751,040	1%	5
June	4,256,148	4,064,294	-5%	0

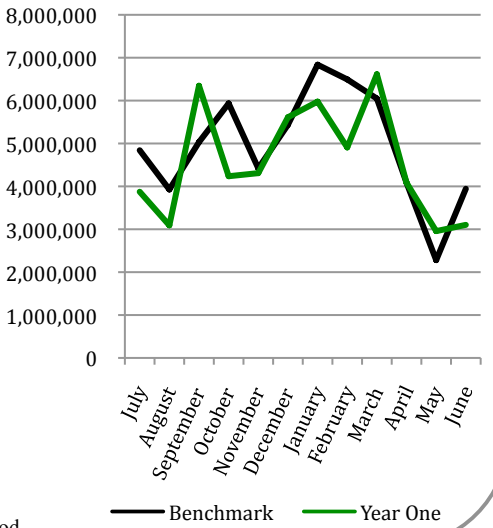
* Values shown in red are an indication of an increase from the benchmark period



Xcel Energy Center – Total Energy Use Comparison (in kBTU)

Month	Benchmark	Year One	Change	Temp +/-
July	4,841,983	3,874,502	-20%	-6
August	3,926,724	3,091,503	-21%	-2
September	5,031,653	6,346,167	26%	2
October	5,934,127	4,236,547	-29%	-11
November	4,419,978	4,308,553	-3%	8
December	5,436,796	5,611,158	3%	1
January	6,837,106	5,976,199	-13%	0
February	6,493,895	4,907,643	-24%	5
March	6,047,500	6,613,964	9%	13
April	4,083,544	4,083,635	0%	11
May	2,279,704	2,956,664	30%	5
June	3,944,036	3,102,623	-21%	0

* Values shown in red are an indication of an increase from the benchmark period



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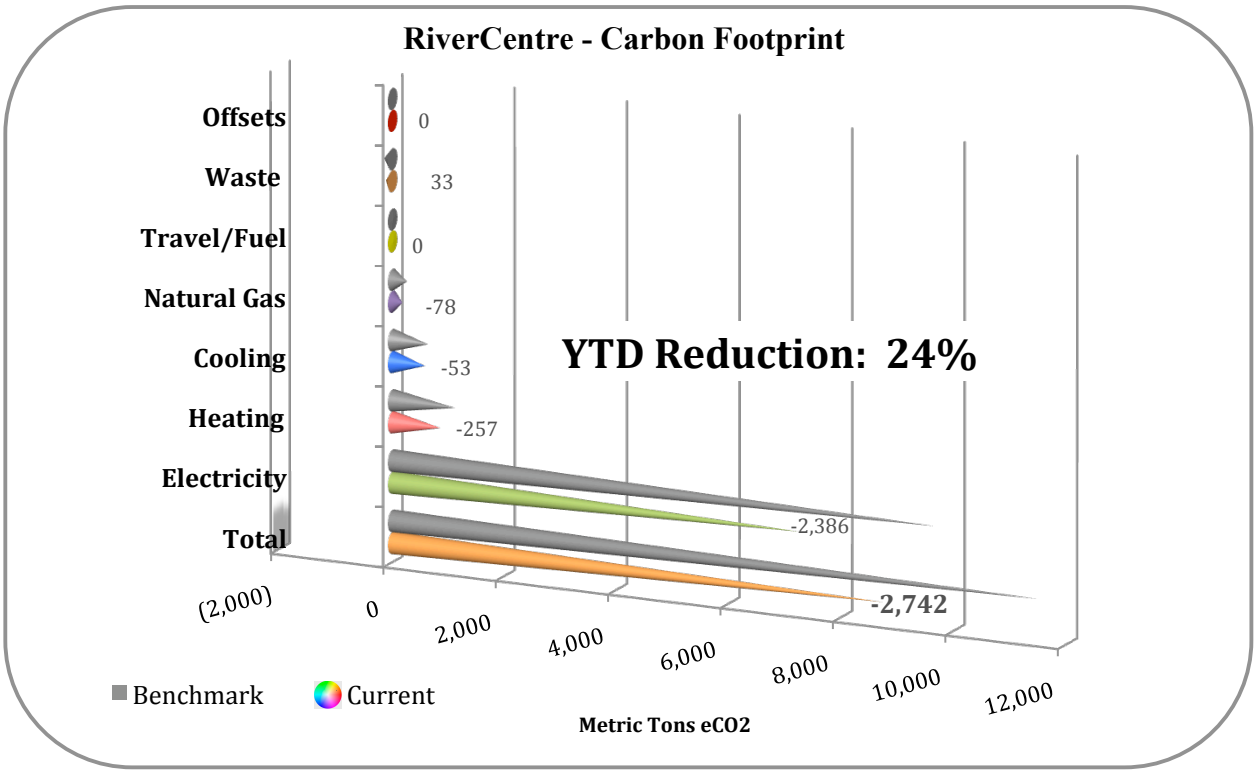
Annual Report

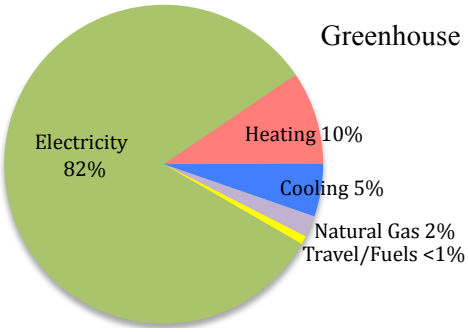
July 2009 - June 2010

Prepared by: Progressive Associates, Inc.

Energy Initiative: Carbon Analysis



Benchmark Data: July 07 – June 08



Greenhouse Gas Assessment

Electric =	9,626
Heating =	1,105
Cooling =	627
Natural Gas =	254
Travel/Fuels =	11
Waste =	(149)
	11,473
	tons eCO2

Key Take Away Points:

- The reduction of 24% was seen across all categories as a result of more efficient operations.
- RiverCentre footprint includes energy used by its parking ramp; a retrofit of over 900 fixtures contributed and was the first upgrade of the three-year plan.

NOTES: The apparent increase in waste emissions is related to changes in the EPA's waste/emissions calculator.
Travel emissions do not include employee commuting – only direct work travel.

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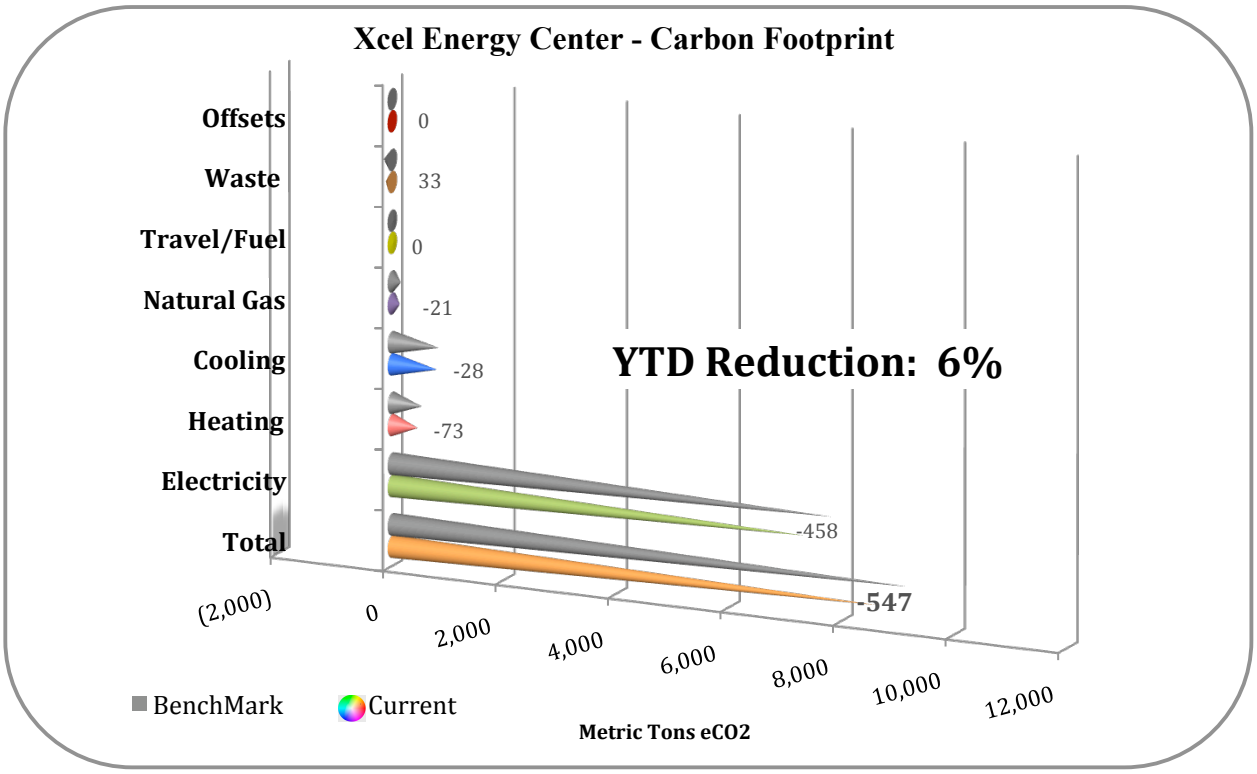

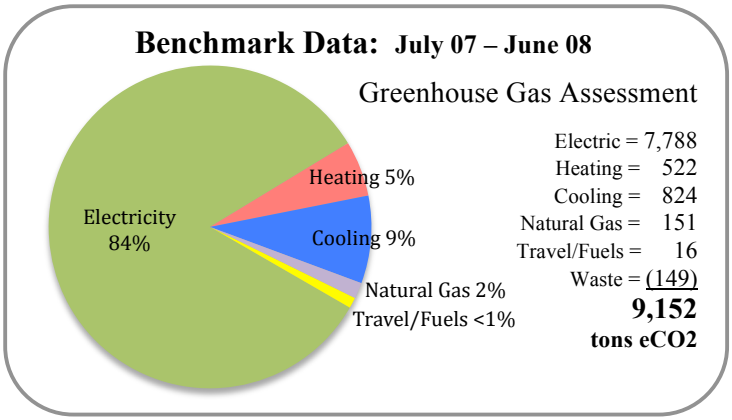

Key Take Away Points:

- Xcel Energy Center footprint reduced by 6%. Reduction largely tied to increased efficiency of operations
- Electricity is largest contributor to this footprint; several retrofits are planned for the next two years.

NOTES: The apparent increase in waste emissions is related to changes in the EPA's waste/emissions calculator.
Travel emissions do not include employee communting – only direct work travel.

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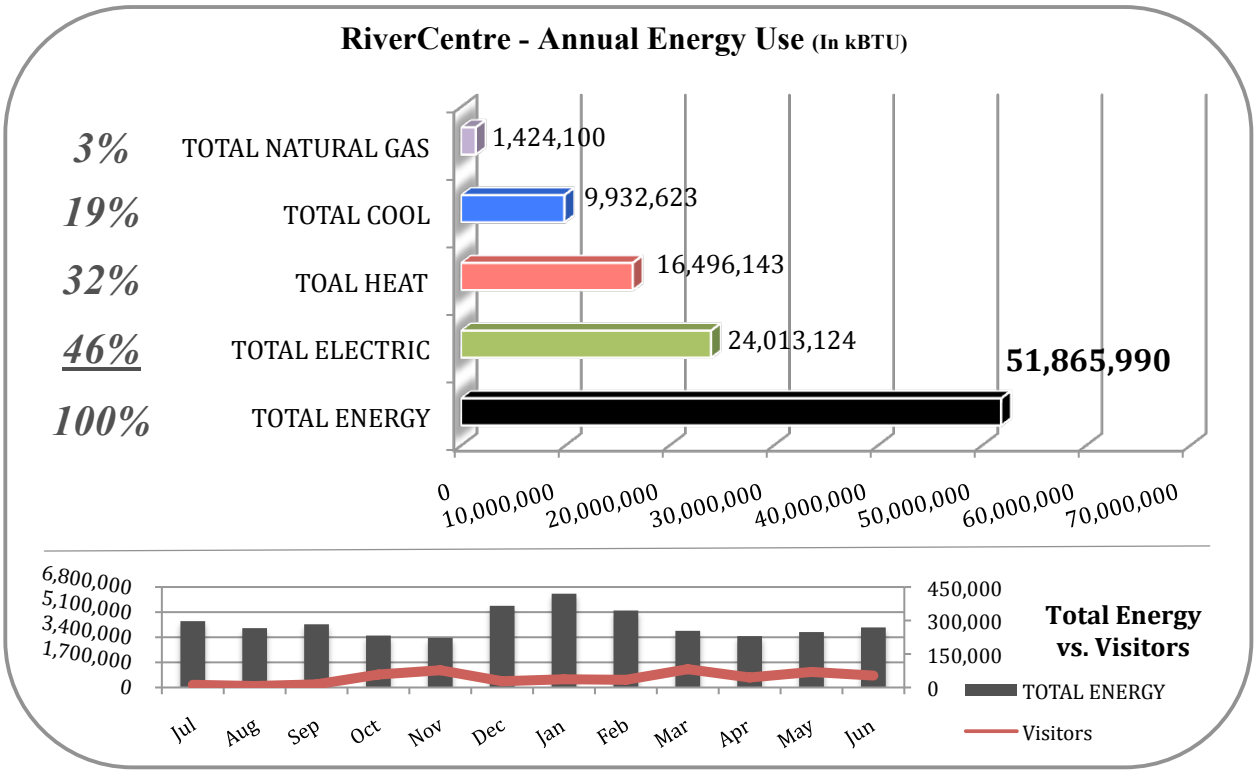

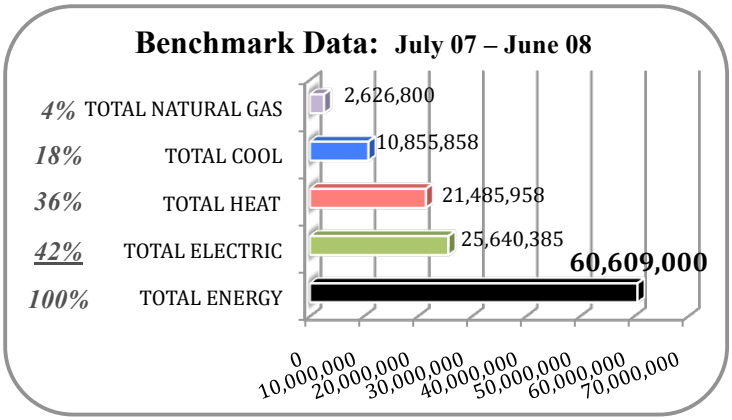

Key Take Away Points:

- Energy use at RiverCentre decreased in every category with a total reduction of 8,743,010 kBTU this year
- Natural Gas use was almost cut in half.
- The decrease in heating usage was approximately 23%.
- Overall energy use at RiverCentre tracks more closely with seasonal weather changes than visitors.

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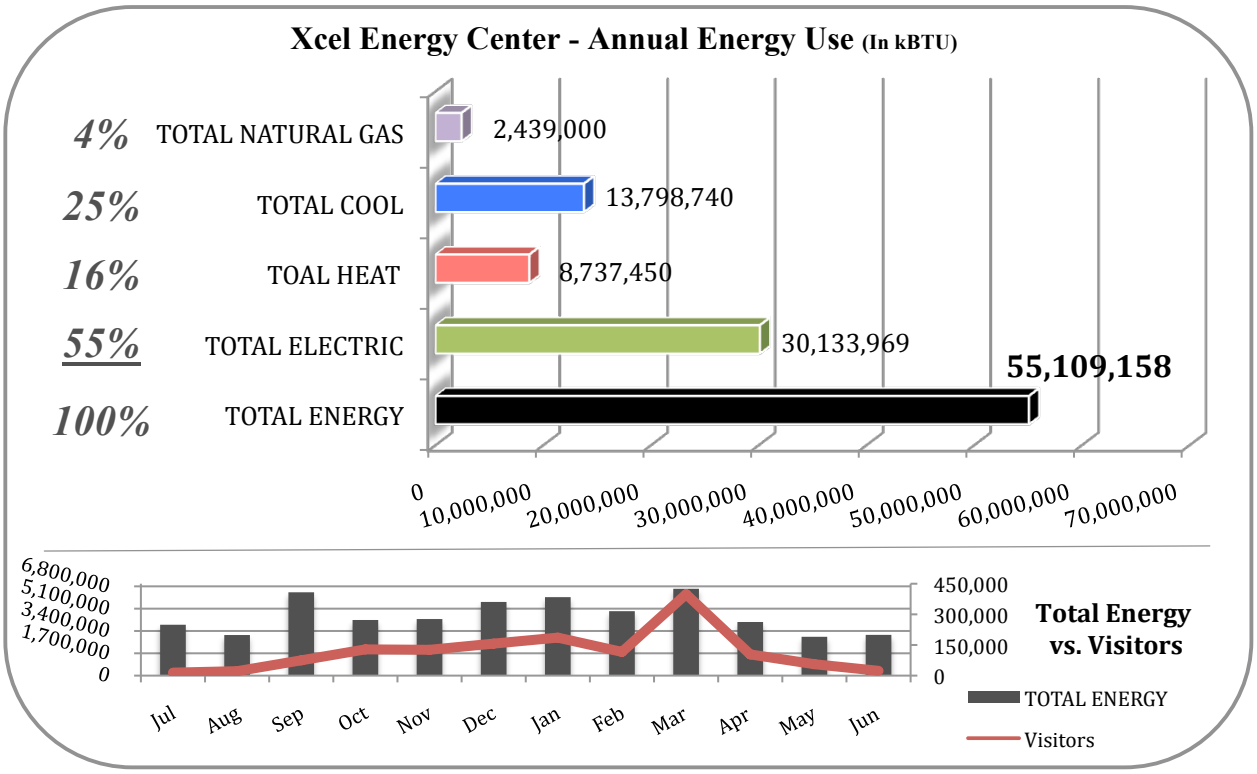

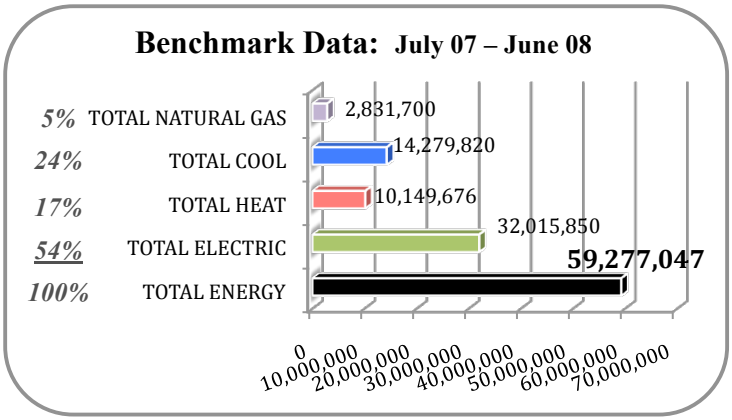

Key Take Away Points:

- Energy use at Xcel Energy Center decreased in every category with total reduction of 4,167,889 kBTU this year
- Larger decreases were seen in electricity and heating. Cooling was down slightly.
- Heating remains a smaller component due to the nature of XEC events
- Xcel Energy Center's total use is more tied to visitors. However, an unusually warm month will have an effect - as seen by September's 26% usage increase.

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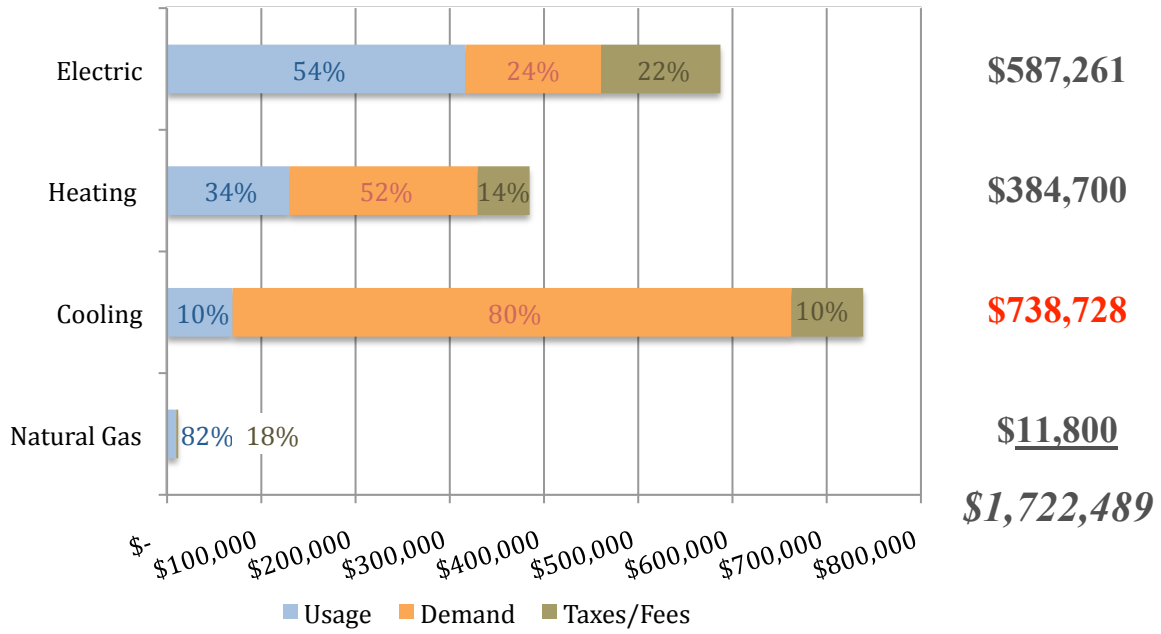
Energy Initiative: Cost Analysis

RiverCentre – Annual Costs Breakdown



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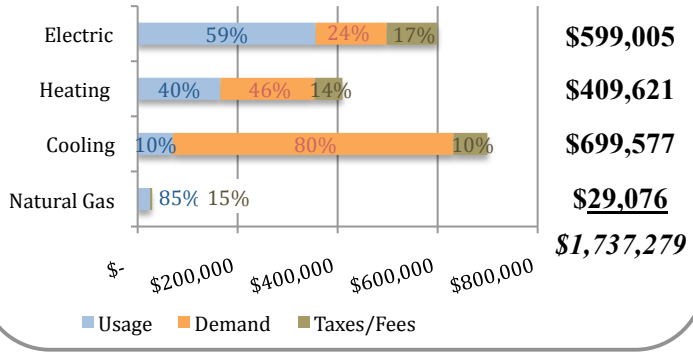
Benchmark Data: July 07 – June 08



Key Take Away Points:

- Total costs are down at RiverCentre by $14,790. Despite a reduction in cooling usage, cooling costs increased.
- The proportion of cost from demand is relatively unchanged. Only heating has shifted, an increase of 6%.
- The more notable increase is that taxes and fees for electricity and natural gas are up, largely due to conservation program funding through Xcel Energy.

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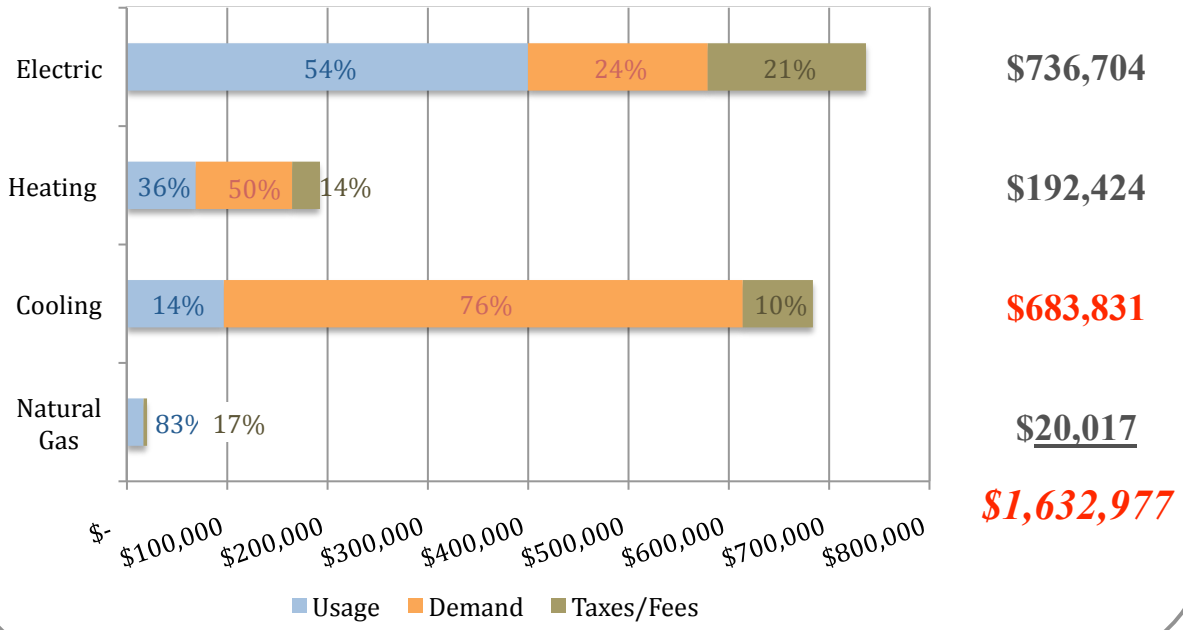
Xcel Energy Center – Annual Costs Breakdown by Proportions



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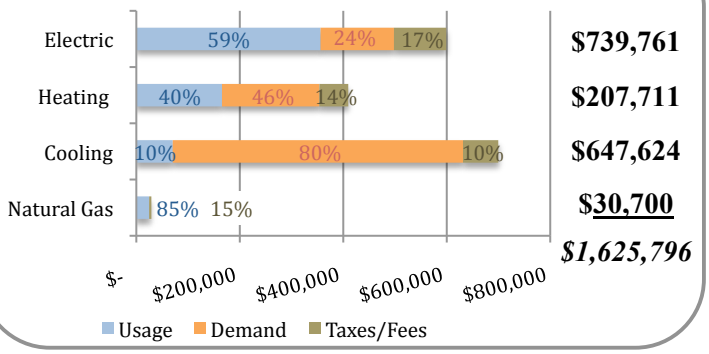

Key Take Away Points:

- Total costs are up at Xcel Energy Center by $7,181, although usage was down in all categories.
- The proportion of cost from demand is up 4% for heating and down 4% for cooling. The heating shift is due to demand cost remaining the same while usage dropped significantly.
- Taxes and fees for electricity and natural gas are up, largely due to conservation program funding through Xcel Energy.