



**University of Michigan
Hospitals and Health Centers**

**Energy Management
Annual Report – Fiscal Year 2016**

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1. EXECUTIVE SUMMARY

In fiscal year 2016, energy management teams continued to expand energy conservation efforts in University of Michigan Hospital and Health Centers (UMHHC) facilities and as a result, UMHHC continues to show improvements in energy efficiency.

Energy Performance

In fiscal year 2016, UMHHC facilities consumed nearly \$23 Million in utilities. These facilities improved their energy efficiency by 4% compared to the previous year, resulting in approximately \$400,000 in avoided utility cost. For further details, see section 2, “Energy Performance” of this report.

Energy Conservation

Fiscal year 2016 continued energy conservation efforts by various energy teams, and continue to show improvements to the overall UMHHC building portfolio. During this year, 2 energy conservation projects were completed in existing facilities which are anticipated to save \$145,000 annually. These projects cost \$486,371 to implement, yielding a 3.4-year overall payback period. For further details, see section 3, “Energy Conservation” of this report.

Environmental Impact

In addition to the demand reduction and cost benefits of energy conservation, improvements also provide a significant environmental benefit by reducing the greenhouse gas emissions associated with the generation of building utilities. Existing facilities improved total utility driven greenhouse gas emission efficiency by 1% compared to fiscal year 2015, yielding approximately 2,300 Tons of avoided greenhouse gas emissions. For further details, see section 4, “Environmental Impact” of this report.

Building Summary & Energy Star

Based on analyses of building utilities and efficiencies, the following buildings are identified as the most efficient UMHHC facilities, categorized by building type:

- Hospital Building: C&W Hospital – 179.7 kBTU/ft²
- Medical Office Building: Dexter Family Practice – 57.1 kBTU/ft²
- General Office Building: Burlington Office Center – 38.7 kBTU/ft²

In total, on a scale of 0 to 100 (100 being the most efficient) the UMHHC building portfolio has earned a score of 36 in the U.S. EPA Energy Star rating system. For further details and a complete listing of UMHHC building performance, see section 5, “Building Summary & Energy Star” of this report.

2. ENERGY PERFORMANCE

In fiscal year 2016, the total utility cost for all UMHHC facilities was \$22.7 Million. Overall, facilities improved their energy efficiency by 4% compared to the previous year, resulting in approximately \$400,000 in total avoided utility cost. This is detailed in Figure 2.1 below.

Figure 2.1: Breakdown of Avoided Utility Cost vs. FY2015

Utility	FY2015 Efficiency	FY2016 Efficiency	FY2016 Average Utility Rate	Avoided Utility Cost
Electric	27.9 KWH/ft ²	28.2 KWH/ft ²	\$0.075/KWH	-\$101,727
Steam	0.0654 MLB/ft ²	0.0609 MLB/ft ²	\$14.52/MLB	\$420,238
Natural Gas	0.0246 MCF/ft ²	0.0216 MCF/ft ²	\$5.67/MCF	\$112,816
Water/Sewer	0.0489 CCF/ft ²	0.0494 CCF/ft ²	\$7.63/CCF	-\$28,293
Total:				\$403,034

Since utility cost rates and the UMHHC portfolio of building area are continually changing, it is important to normalize utility figures for comparison and evaluation of efficiency and performance from year to year. Figure 2.2 illustrates the recent history of total UMHHC building energy efficiency (measured in BTU/ft²) and utility cost efficiency (measured in \$/ft²). Energy efficiency normalizes electric, steam, and natural gas utility into a common energy unit, BTU. Since water & sewer are not an energy utility, this data is not included in this chart. UMHHC facility efficiency has improved 21% since fiscal year 2005.

Figure 2.2: Total UMHHC Historical Energy & Cost Efficiency

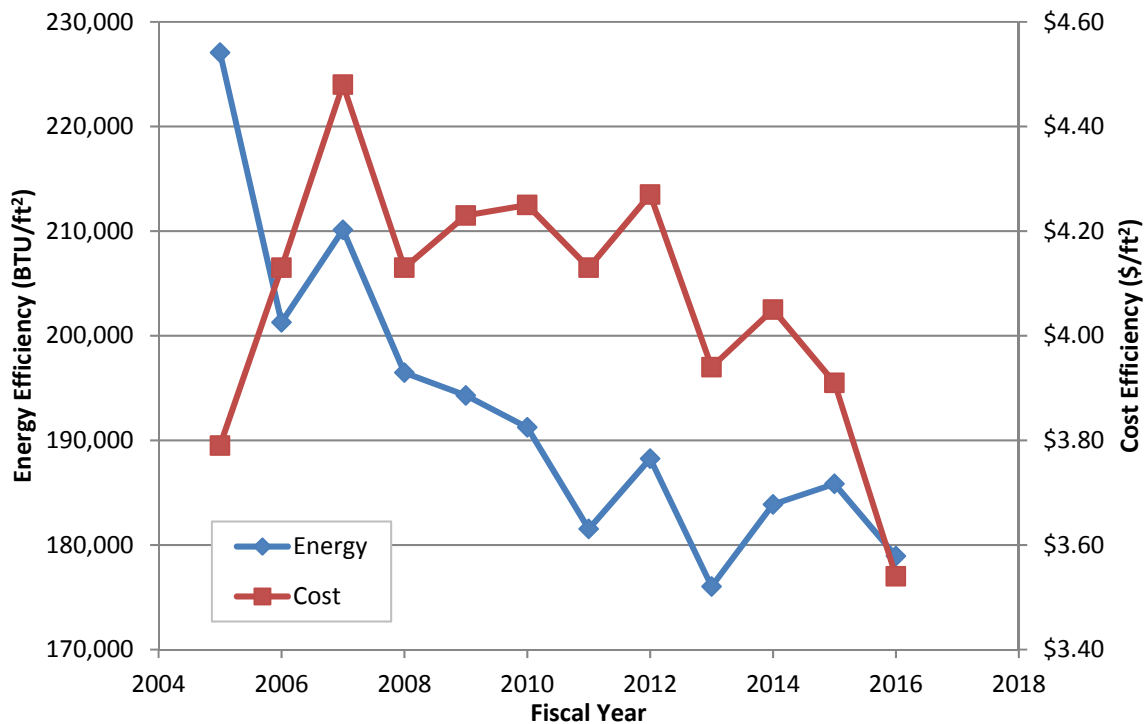


Figure 2.3 below shows the total UMHHC energy and utility cost in recent history without normalizing against building area.

Figure 2.3: Total UMHHC Historical Energy Use & Utility Cost

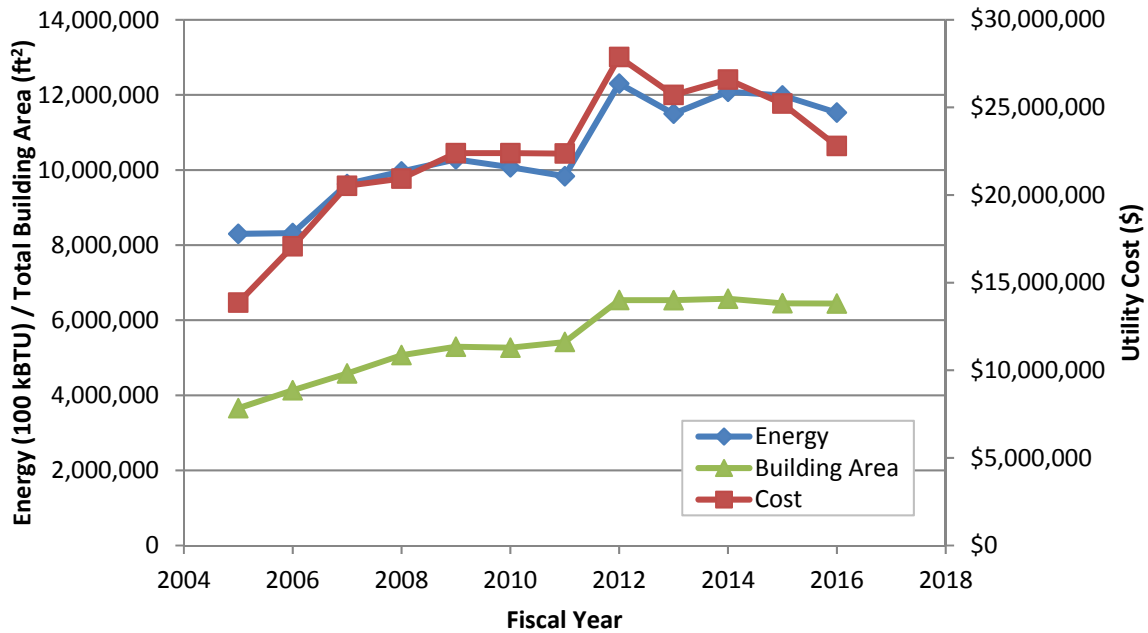


Figure 2.4 below shows the changes in the overall average utility rate across all UMHHC facilities over time. Fiscal years 2015 and 2016 both showed significant decreases in the overall average Electric utility rate which resulted in significant utility cost reductions.

Figure 2.4: Total UMHHC Historical Average Utility Rates

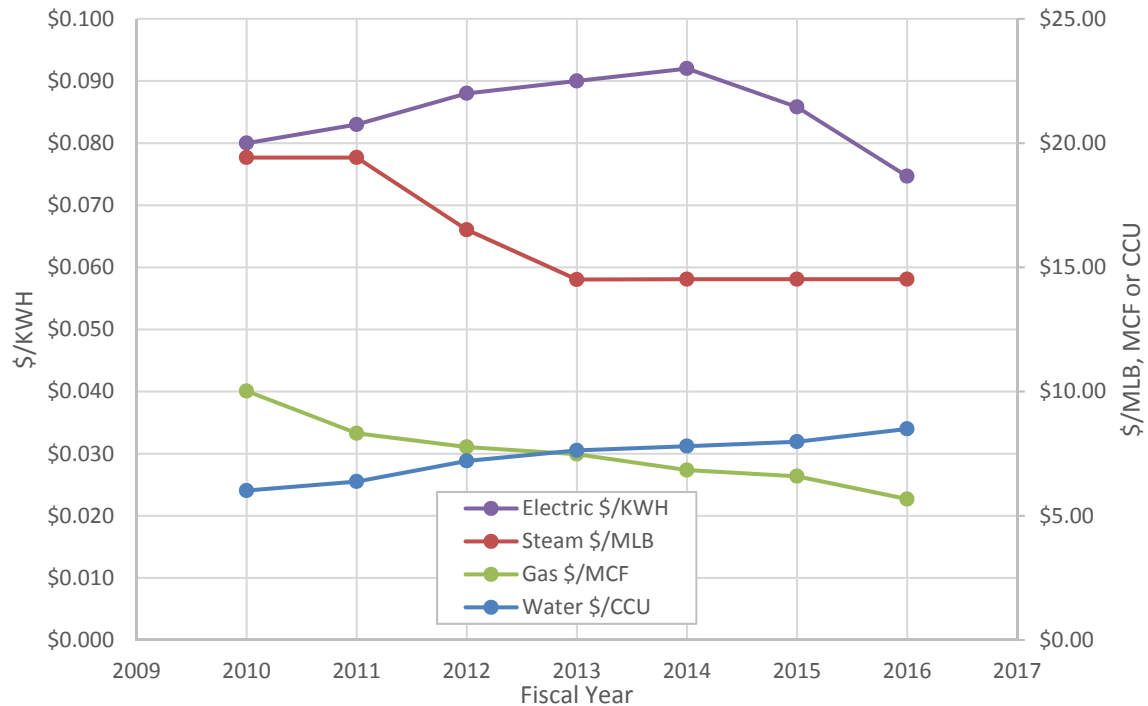
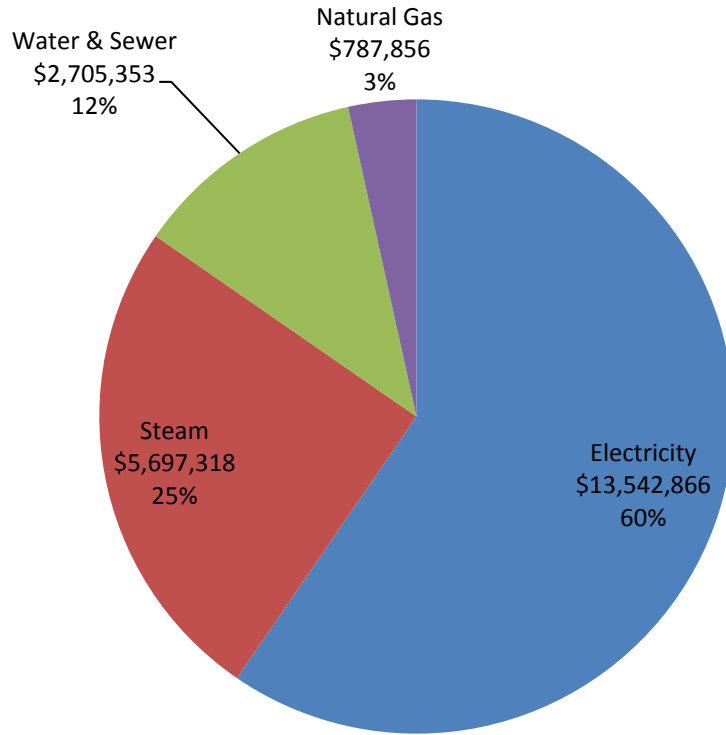


Figure 2.5 below illustrates the distribution and total costs of each of the four primary utilities included in UMHHC facilities for fiscal year 2016.

Figure 2.5: Total FY2016 UMHHC Utility Cost Distribution



3. ENERGY CONSERVATION

Energy Conservation is a combined effort of numerous groups and departments throughout UMHHC. These efforts primarily fall into the following categories:

- **New Construction**
Efficient design and construction practices for new capital construction.
- **Energy Conservation Measures (ECMs)**
Projects in existing facilities designed to improve energy performance.
- **Operations & Maintenance**
Maintain, manage, and optimize building operational efficiency.
- **GreenIT**
Manage power consumption from UMHS computers and IT equipment.

New Construction

UMHHC strives to incorporate energy efficient strategies and practices in all new capital construction projects. This first includes participation and compliance with the University's energy & water conservation standard ([SID-D](#)), including several standardized efficiency practices, compliance with the ASHRAE 90.1-2007 energy standard, and achieving 30% energy improvement from baseline compliance for projects over \$10 Million in construction whenever possible. Every UMHHC capital construction project is now reviewed for compliance with these energy and water requirements, and for opportunities to implement other energy conserving design innovations where feasible.

Whenever possible, UMHHC also follows the University's sustainability in facility design and construction standard ([SID-K](#)). Among other sustainable practices, this standard also includes a requirement that all new buildings and building addition projects with over \$10 Million in associated construction costs, are required to achieve Silver certification under the Leadership in Energy and Environmental Design (LEED) system managed by the United States Green Building Council (USGBC). This LEED program and rating/certification system is designed to encourage sustainable design practices, covering numerous disciplines including site selection & protection during construction, energy & water efficiency, material selection & sourcing, indoor environmental quality, and more. This program offers building certification awards; base certification, silver, gold and platinum.

Energy Conservation Measures (ECMs)

In fiscal year 2016, 2 new energy conservation projects were completed in existing facilities which are anticipated to provide approximately \$145,000/year in incremental energy savings. These cost \$486,371 to implement, yielding a 3.4-year overall payback period. This is summarized in Figure 3.2 below.

Figure 3.2: ECM Projects Completed in FY2015

Building	Project Description	Project Cost	Estimated Savings	Payback (Years)
Children's & Women's Hospital	Install new airflow sensors on central air handling systems to reduce fan motor horsepower requirements and to more precisely control outside air concentration.	\$300,000	\$100,000	3.0
Cardiovascular Center	Install new pump speed drives and flow controls to optimize chilled water plant electrical efficiency.	\$186,371	\$45,000	4.5
Totals:		\$486,371	\$145,000	3.4

Operations & Maintenance

UMHHC Operations & Maintenance teams are continuously working to maintain equipment at peak efficiency, to improve and optimize operations wherever possible, and to quickly respond and resolve operational issues at all 6.4 million ft² of UMHHC buildings. This includes several key tasks for an extensive body of equipment and instruments. Examples of key equipment are listed below:

- Building automation systems
- Environmental controls & instruments
- Room temperature controls
- Air handling units
- Pumps
- Chillers
- Boilers
- Steam Traps

GreenIT

The GreenIT initiative began in 2009 with the goal of reducing desktop computer power consumption to over 15,000 workstations across the health system. This initiative seeks to set automatic on and off times and enable power saving standby modes for system computers when feasible. This initiative has resulted in more than a 40% reduction in health system computer power consumption.

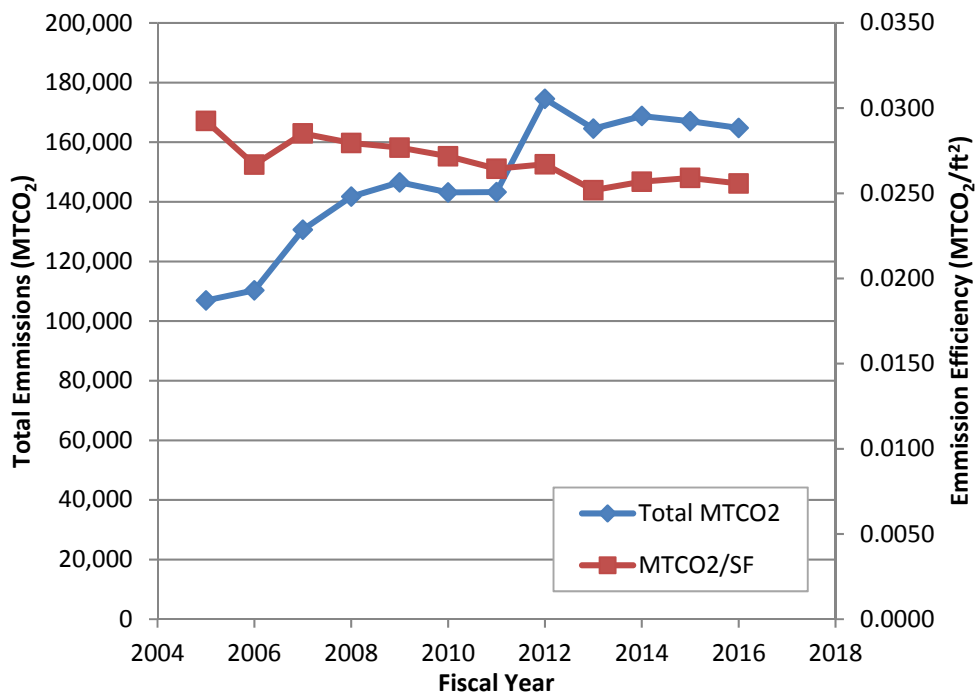
GreenIT teams are continuously working to further improve computer and IT system power management and to maintain energy performance amidst continuous changes to the Health System equipment and software, which now includes approximately 20,000 workstations. GreenIT teams are currently working to identify and update energy management of remaining departments and workstations unnecessarily operating computers and IT equipment continuously.

4. ENVIRONMENTAL IMPACT

In addition to the benefits of reducing overall energy and utility resource demands, efficiency improvements provide further benefits by reducing the greenhouse gas emissions generated during the production of utilities. Figure 4.1 below shows the total historical UMHHC greenhouse gas emission quantities and greenhouse gas emission efficiencies, normalized against total UMHHC building area. Emissions are measured in metric tons of carbon dioxide (MTCO₂). Please note that these figures only include greenhouse gas emissions due to the generation of utilities consumed by facilities, and do not include emissions from other institution operations. In fiscal year 2016, UMHHC decreased utility driven emissions by 1%. This equates to nearly 2,300 MTCO₂ of avoided greenhouse gas emissions, which is equivalent to removing over 400 automobiles from the road.

In 2011, UM President Coleman announced new sustainability commitments for the University. These commitments include a 25% reduction in total greenhouse gas emissions by FY2025, compared to a FY2006 baseline. It is anticipated that this will be accomplished through improvements to a number of areas of University operations, including major upgrades to onsite utility generation plants, in addition to improvements to existing buildings, University vehicle upgrades, etc. Thus far, UMHHC has increased its total building utility driven emissions by 49% compared to FY2006, however this is across a period of 56% growth in total UMHHC building area in that time. When normalized against total building area, UMHHC has improved its total emission per square foot efficiency by 4% since FY2006. Therefore, UMHHC has significantly expanded but has improved total emission efficiency during that time.

Figure 4.1: UMHHC Utility Driven Greenhouse Gas Emission History



5. BUILDING SUMMARY & ENERGY STAR

During fiscal year 2012, a comprehensive profile was created for all UMHHC facilities within the Energy Star Portfolio Manager benchmarking tool, provided by the U.S. Environmental Protection Agency (EPA) and the Department of Energy (DOE). This tool organizes facility energy data, normalizes data against building size, weather, geographic location, building use types, occupancy, number of licensed beds, etc., and generates a rating score that can be used for benchmarking. Scores range from 0 to 100. A score of 50 is the national average. A score of 75 qualifies a building for the Energy Star Certification award. In fiscal year 2016, UMHHC facility scores in aggregate calculated to a total portfolio score of 36. This is improved from a baseline score of 25 in fiscal year 2012. Figure 5.1 below illustrates UMHHC’s Energy Star rating progress towards national average and Energy Star Award levels.

Figure 5.1: UMHHC Energy Star Portfolio Rating

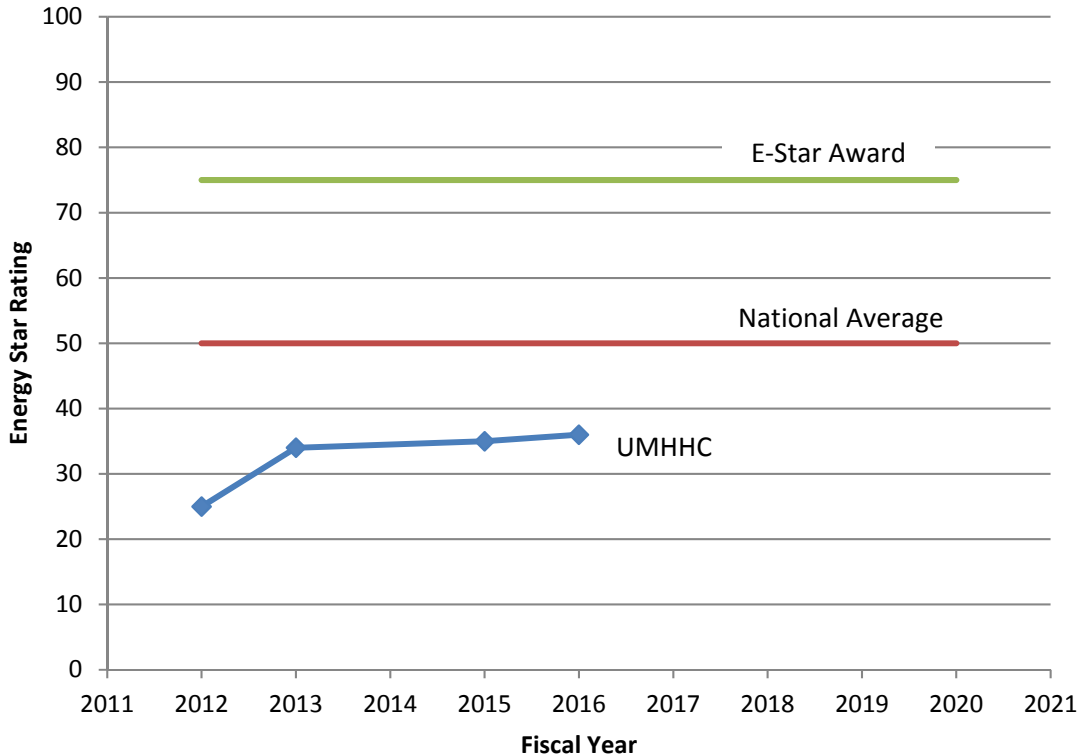


Figure 5.2 indicates the most efficient UMHHC buildings in fiscal year 2016, sorted by the primary Energy Star building type. Due to combined metering and shared utilities between facilities, several buildings are not included in this list because the available utility data does not represent the total utility consumed by the building, and therefore does not provide an accurate measure of efficiency. It should be noted, that energy and efficiency data provided within this report and the table below are based on “site” energy use, which is used for billing. Energy Star ratings are based on “source” energy use which incorporates the efficiency of the utility plant supplying the facility.

Figure 5.2: FY2016 UMHHC Most Energy Efficient Buildings

Rank	ID	Building	Efficiency (kBTU/ft²)	Energy Star Rating	Total Utility Cost
<i>Hospitals</i>					
1.	5173	Children's & Women's Hospital	179.7	60	\$4,359,122
2.	5109	Cardiovascular Center	189.7	N/A	\$1,836,771
3.	0316	University Hospital Building	229.3	12	\$7,810,618
<i>Medical Office Buildings</i>					
1.	8149	Dexter Family Practice	57.1	44	\$15,700
2.	8161	Kellogg Eye Center – Brighton	57.1	46	\$8,858
3.	8042	Briarwood 4	65.1	44	\$25,509
4.	8111	Howell Pediatrics	65.5	N/A	\$4,928
5.	8155	Livonia Health Center	66.2	64	\$16,833
<i>General Office Buildings</i>					
1.	5011	Burlington Office Center	38.7	80	\$74,068
2.	8162	Traverwood 1	45.0	85	\$11,295
3.	5153	Traverwood 3	52.8	83	\$41,534
4.	8100	2101 Commonwealth	64.0	79	\$51,366
5.	8137	Michigan House	64.3	74	\$132,204

Figure 5.3 (attached) shows fiscal year 2016 information vs. fiscal year 2015 including energy and utility cost comparison data. Please note that data is not directly comparable since data for several buildings does not include total consumed utility due to combined meters and shared utilities.

Figure 5.3: FY2016 vs. FY2015 UMHHC Building Utility Summary

ID	Name	E-Star Bldg Type	FY15				FY16				FY Comparison					
			SQFT	Cost	BTU/SF	kBTU	SQFT	Cost	BTU/SF	kBTU	SQFT	Cost	Cost %	BTU/SF	kBTU	kBTU %
301	Cancer Center	Laboratory	136,120	\$948,481	343,418	46,746,058	136,120	\$847,951	326,123	44,391,863	0	-\$100,530	-11%	-17,295	-2,354,195	-5%
306	East Mechanical Bldg	N/A	8,006	\$304,729	1,622,733	12,991,600	8,006	\$330,086	1,757,800	14,072,947	0	\$25,357	8%	135,067	1,081,346	8%
308	Med Inn	Medical Office	121,126	\$336,285	142,481	17,258,154	121,126	\$326,879	138,063	16,723,019	0	-\$9,406	-3%	-4,418	-535,135	-3%
309	UH South Unit 1	Medical Office	67,494	\$123,606	96,458	6,510,336	67,494	\$101,959	77,917	5,258,930	0	-\$21,647	-18%	-18,541	-1,251,406	-19%
312	UH South Unit 2	Medical Office	266,038	\$330,108	77,455	20,605,973	266,038	\$338,347	77,282	20,559,949	0	\$8,234	2%	-173	-46,025	0%
314	UH South Unit 3	Medical Office	19,988	\$66,582	225,422	4,505,735	19,988	\$46,214	155,099	3,100,119	0	-\$20,368	-31%	-70,323	-1,405,616	-31%
316	University Hospital Building	Hospital	1,721,523	\$8,809,420	240,033	413,222,330	1,721,523	\$7,810,618	229,252	394,662,591	0	-\$998,802	-11%	-10,781	-18,559,739	-4%
317	Taubman Health Center	Medical Office	396,965	\$1,045,767	131,061	52,026,630	396,965	\$969,422	131,211	52,086,175	0	-\$76,345	-7%	150	59,545	0%
318	UH South Unit 4	Medical Office	157,595	\$222,267	89,136	14,047,388	157,595	\$218,963	86,243	13,591,466	0	-\$3,304	-1%	-2,893	-455,922	-3%
319	Medical Professional Building	Office	37,298	\$61,863	71,513	2,667,292	37,298	\$75,840	94,589	3,527,981	0	\$13,977	23%	23,076	860,689	32%
320	Parking - M22 Simpson Circle	N/A	204,063	\$59,270	0	0	196,734	\$55,655	0	0	-7,329	-\$3,615	-6%	0	#DIV/0!	
327	1018 Fuller Building	N/A	8,349	\$10,238	58,094	485,027	8,349	\$7,270	45,900	383,219	0	-\$2,968	-29%	-12,194	-101,808	-21%
332	300 N Ingalls	Office	238,791	\$497,305	106,982	25,546,339	239,318	\$493,879	111,907	26,781,359	527	-\$3,426	-1%	4,925	1,235,021	5%
348	Chelsea Family Practice	Medical Office	25,136	\$58,086	108,055	2,716,070	25,136	\$54,870	96,782	2,432,712	0	-\$3,216	-6%	-11,273	-283,358	-10%
350	EAA Health Center	Medical Office	97,158	\$951,393	434,097	42,175,996	97,158	\$858,379	423,348	41,131,645	0	-\$93,014	-10%	-10,749	-1,044,351	-2%
390	Child Care Center	N/A	14,850	\$28,031	105,291	1,563,571	14,850	\$29,002	92,958	1,380,426	0	\$971	3%	-12,333	-183,145	-12%
399	NCAC	Office	133,741	\$290,538	157,086	21,008,839	133,741	\$289,423	149,204	19,954,692	0	-\$1,115	0%	-7,882	-1,054,147	-5%
419	Laundry	Specialty	48,298	\$490,065	910,376	43,969,340	48,316	\$556,160	989,012	47,785,104	18	\$66,095	13%	78,636	3,815,764	9%
829	RP Housing 1322 Wilmott	N/A	1,819	\$3,858	99,355	180,727	1,819	\$4,939	92,116	167,559	0	\$1,081	28%	-7,239	-13,168	-7%
5011	Burlington Office Center	Office	64,283	\$86,861	36,932	2,374,100	63,221	\$74,068	38,666	2,444,503	-1,062	-\$12,793	-15%	1,734	70,403	3%
5019	Canton Health Center	Medical Office	51,552	\$126,102	95,012	4,898,059	51,552	\$98,293	81,332	4,192,827	0	-\$27,809	-22%	-13,680	-705,231	-14%
5029	Brighton Health Center	Medical Office	41,500	\$170,086	230,568	9,568,572	41,500	\$133,462	214,738	8,911,627	0	-\$36,624	-22%	-15,830	-656,945	-7%
5038	EAA Surgery Center	Ambulatory Surgery Ctr	49,906	\$183,634	279,025	13,925,022	49,906	\$159,790	196,438	9,803,435	0	-\$23,844	-13%	-82,587	-4,121,587	-30%
5056	New Hope Baptist Church	N/A	866	\$1,179	15,372	13,312	0	\$0	0	0	-866	-\$1,179	-100%	-15,372	-13,312	-100%
5058	Michigan Visiting Nurses	N/A	2,140	\$1,363	19,198	41,084	2,140	\$977	20,235	43,303	0	-\$386	-28%	1,037	2,219	5%
5070	Eisenhower CP	Warehouse	37,606	\$79,611	99,303	3,734,389	37,606	\$61,427	79,119	2,975,349	0	-\$18,184	-23%	-20,184	-759,040	-20%
5098	Kellogg Eye Center - Milford	Medical Office	2,523	\$5,616	106,945	269,822	2,523	\$3,990	89,689	226,285	0	-\$1,626	-29%	-17,256	-43,537	-16%
5109	Cardiovascular Center	Hospital	444,952	\$1,992,391	186,076	82,794,888	444,952	\$1,836,771	189,667	84,392,711	0	-\$155,620	-8%	3,591	1,597,823	2%
5117	Upjohn Rachel Building	Medical Office	117,097	\$95,951	91,930	10,764,727	117,097	\$74,463	72,849	8,530,399	0	-\$21,488	-22%	-19,081	-2,234,328	-21%
5143	Traverwood II	Office	27,836	\$161,621	294,593	8,200,291	27,836	\$118,389	241,618	6,725,679	0	-\$43,232	-27%	-52,975	-1,474,612	-18%
5153	Traverwood III	Office	27,624	\$52,252	66,636	1,840,753	27,624	\$41,534	52,775	1,457,857	0	-\$10,718	-21%	-13,861	-382,896	-21%
5165	Great Lakes Environmental Lab	N/A	14,286	\$2,430	16,240	232,005	14,286	\$3,267	29,544	422,066	0	\$837	34%	13,304	190,061	82%
5173	Children's & Women's Hospital	Hospital	1,139,406	\$4,879,724	187,309	213,420,998	1,139,406	\$4,359,122	179,735	204,791,137	0	-\$520,602	-11%	-7,574	-8,629,861	-4%
5223	NC Auxiliary Support Bldg	Data Center	53,530	\$688,775	526,149	28,164,756	53,530	\$704,016	537,626	28,779,120	0	\$15,241	2%	11,477	614,364	2%
5241	Traverwood IV	Laboratory	9,640	\$103,525	667,201	6,431,818	9,640	\$81,403	544,431	5,248,315	0	-\$22,122	-21%	-122,770	-1,183,503	-18%
5296	Howell Teen Clinic	N/A	785	\$1,411	97,964	76,902	785	\$1,026	70,018	54,964	0	-\$385	-27%	-27,946	-21,938	-29%
5340	River Place Offices	Office	7,124	\$20,634	115,142	820,272	7,124	\$14,470	82,092	584,823	0	-\$6,164	-30%	-33,050	-235,448	-29%
5341	Northville Health Center	Medical Office	102,228	\$247,642	118,426	12,106,453	102,228	\$246,796	130,029	13,292,605	0	-\$846	0%	11,603	1,186,151	10%
5353	719 Ellsworth Rd	N/A	7,127	\$4,474	71,495	509,545	7,127	\$3,052	56,227	400,730	0	-\$1,422	-32%	-15,268	-108,815	-21%
8016	Briarwood 5	Medical Office	9,378	\$55,809	373,502	3,502,702	9,378	\$37,775	249,522	2,340,017	0	-\$18,034	-32%	-123,980	-1,162,684	-33%
8030	Briarwood Cntr	Medical Office	15,924	\$67,736	220,128	3,505,318	15,924	\$52,355	189,855	3,023,251	0	-\$15,381	-23%	-30,273	-482,067	-14%
8036	Survival Flight Ann Arbor Airport	N/A	10,000	\$17,171	162,653	1,626,530	10,000	\$8,736	87,001	870,010	0	-\$8,435	-49%	-75,652	-756,520	-47%
8039	RP Housing 1011 Cornwell Place	N/A	2,879	\$5,752	127,470	366,986	2,879	\$6,266	111,774	321,797	0	\$514	9%	-15,696	-45,189	-12%
8042	Briarwood 4	Medical Office	14,063	\$27,004	55,674	782,943	14,063	\$25,509	65,082	915,248	0	-\$1,495	-6%	9,408	132,305	17%
8060	101 Simpson Rd	N/A	2,791	\$2,406	34,485	96,248	2,791	\$1,331	17,939	50,068	0	-\$1,075	-45%	-16,546	-46,180	-48%
8065	Briarwood 3	Medical Office	10,611	\$24,734	72,778	772,247	10,611	\$21,524	69,463	737,072	0	-\$3,210	-13%	-3,315	-35,175	-5%
8072	Eisenhower Corporate Park West	Medical Office	76,726	\$283,630	142,471	10,931,230	76,726	\$235,353	123,651	9,487,247	0	-\$48,277	-17%	-18,820	-1,443,983	-13%
8076	Briarwood 1	Medical Office	17,699	\$91,137	273,977	4,849,119	17,699	\$66,481	237,813	4,209,052	0	-\$24,656	-27%	-66,164	-640,067	-13%
8096	Livonia Specialty Care	Medical Office	46,607	\$202,197	215,364	10,037,470	46,607	\$153,111	197,024	9,182,698	0	-\$49,086	-24%	-18,340	-854,772	-9%
8100	Plymouth Park	Office	43,423	\$68,473	76,116	3,305,185	43,423	\$51,366	64,031	2,780,418	0	-\$17,107	-25%	-12,085	-524,767	-16%
8110	West Ann Arbor Health Center	Medical Office	6,131	\$15,753	83,377	511,184	6,131	\$12,862	74,432	456,343	0	-\$2,891	-18%	-8,945	-54,842	-11%
8111	Howell Pediatrics	Medical Office	2,840	\$6,032	75,939	215,667	2,840	\$4,928	65,490	185,992	0	-\$1,104	-18%	-10,449	-29,675	-14%
8112	Occupational Medicine Bldg	Medical Office	9,020	\$29,194	136,117	1,227,775	9,020	\$24,790	141,094	1,272,668	0	-\$4,404	-15%	4,977	44,893	4%
8116	Ann Arbor Ice Cube	N/A	8,672	\$4,573	65,621	569,065	8,672	\$3,125	50,430	437,329	0	-\$1,448	-32%	-15,191	-131,736	-23%
8121	Saline Health Center	Medical Office	7,133	\$21,467	139,552	995,424	7,133	\$17,657	123,594	881,596	0	-\$3,810	-18%	-15,958	-113,828	-11%
8126	KMS Fusion Bldg	Office	125,908	\$240,107	80,689	10,159,391	125,908	\$213,960	73,389	9,240,262	0	-\$26,147	-11%	-7,300	-919,128	-9%
8130	Briarwood 10	Medical Office	17,435	\$74,634	211,073	3,680,058	17,435	\$62,174	197,930	3,450,910	0	-\$12,460	-17%	-13,143	-229,148	-6%
8137	Michigan House	Office	74,710	\$171,057	70,884	5,295,744	74,710	\$132,204	64,307	4,804,376	0	-\$38,853	-23%	-6,577	-491,368	-9%
8142	Briarwood 9	Medical Office	5,287	\$32,939	278,376	1,471,774	5,287	\$24,077	227,902	1,204,918	0	-\$8,862	-27%	-50,474	-266,856	-18%
8149	Dexter Family Practice	Medical Office	8,020	\$14,192	70,188	562,908	10,065	\$15,700	57,078	574,490	2,045	\$1,508	11%	-13,110	11,582	2%

Figure 5.3: FY2016 vs. FY2015 UMHHC Building Utility Summary

ID	Name	E-Star Bldg Type	FY15				FY16				FY Comparison					
			SQFT	Cost	BTU/SF	kBTU	SQFT	Cost	BTU/SF	kBTU	SQFT	Cost	Cost %	BTU/SF	kBTU	kBTU %
8155	Livonia Health Center	Medical Office	11,130	\$22,895	83,765	932,304	11,130	\$16,833	66,151	736,261	0	-\$6,062	-26%	-17,614	-196,044	-21%
8160	Kellogg Eye Center - W Bloom	Medical Office	0	\$0	0	0	2,523	\$3,990	89,689	226,285	2,523	\$3,990	#DIV/0!	89,689	226,285	#DIV/0!
8161	Kellogg Eye Center - Brighton	Medical Office	6,696	\$10,590	66,684	446,516	6,795	\$8,858	57,104	388,022	99	-\$1,732	-16%	-9,580	-58,494	-13%
8162	Traverwood	Office	10,027	\$14,401	53,693	538,380	10,096	\$11,295	44,976	454,078	69	-\$3,106	-22%	-8,717	-84,302	-16%
9599	UMH Sign 1525 Fuller St	N/A	0	\$427	0	0	0	\$267	0	0	0	-\$160	-37%	0	0	#DIV/0!
9601	Hospital Chilled Water Loop	N/A	0	\$158,521	0	0	0	\$147,715	0	0	0	-\$10,806	-7%	0	0	#DIV/0!
5173T	C&W Trailer	N/A	0	\$10,089	0	0	0	\$6,979	0	0	0	-\$3,110	-31%	0	0	#DIV/0!
Totals:			6,449,479	\$25,216,094	185,255	1,194,797,340	6,445,503	\$22,799,390	178,341	1,149,499,896	-3,976	-\$2,416,704	-9.6%	-6,913	-45,297,445	-3.7%