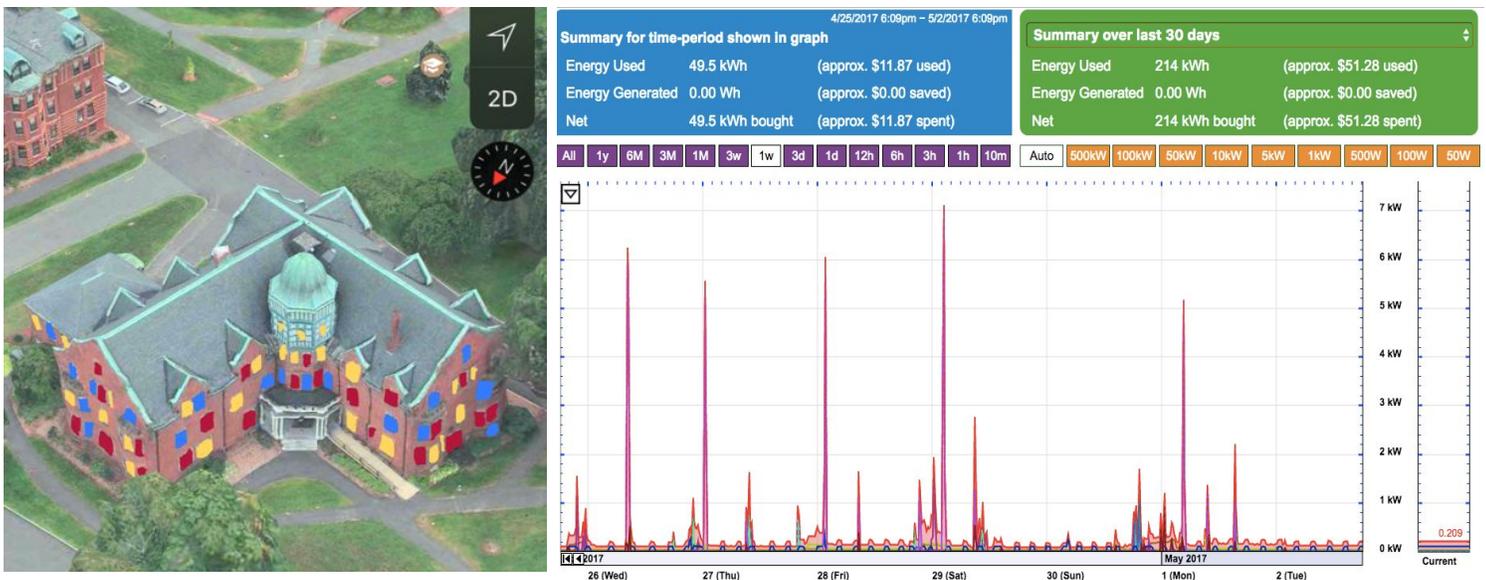


Be Accountable for your Energy Consumption

Mount Holyoke College is filled with passionate and intelligent students that are concerned about the environment, begging the Administration to stop the madness and be a leader in the fight for divestment from fossil fuels. But, are students aware of their own wasteful and unnecessary energy consumption in their living spaces? As we turn on two different lamps at a time for a “cozy” study space and leave our laptops and phones charging overnight, we are neglecting our own responsibility for the ways in which Mount Holyoke can become a more efficient campus. In order for students to reduce their energy consumption, their wastefulness needs to be placed somewhere that cannot be ignored. It is the responsibility of Mount Holyoke College, as a private institution, to align their goals with state regulations. The call to action has passed; now we are simply behind. - OK

What else can we do?

- The Proposition: place one motion activated monitor in the entryway of each dorm. Each monitor would display an image of each floor's energy consumption, as well as the total energy consumption for the entire building. There would also be a portion that would display the energy consumption per person per day in that dorm. An email would be sent out each week with individual dorm information. -CB
- Direct feedback on energy consumption is known to produce a 5-15% savings in energy consumption.¹- CB
- The winning dorm in War of the Watts 2016 saw a 36% reduction in energy use over 2 weeks². A similar decrease in energy use throughout the entire school year would have a much higher impact on our carbon footprint and energy costs-CB
- It will cost between \$1,500 and \$3,000 to install monitors in the entryway of each dorm³-CB
- Consumption would be displayed like the image on the right, with red denoting the highest usage, blue the least, and yellow in the middle.
- The image below is an approximation of what would be sent to the students each week, detailing their energy consumption from various outlets in the room, along with lights and heating.⁴



What does college/university energy consumption look like outside of Mount Holyoke College?

- Lighting, ventilation, and cooling consume the most electrical energy while natural gas use accounts for space heating in a typical college or university facility.⁵ Colleges across the United States combined spend close to \$7 billion a year in energy and utility costs.⁶- OK

¹ "The Effectiveness of Feedback on Energy Consumption." *Environmental Change Institute*. University of Oxford, Apr. 2006. Web. 10 Apr 2017.

² "War of the Watts." *Mount Holyoke College*. N.p., 07 Feb. 2017. Web. 10 Apr. 2017

³ Caveman, "Samsung - SD300 Series S24D300HL 23.6" LED FHD Monitor - High glossy black," Best Buy, April 10, 2017, , accessed April 20, 2017

⁴ Arango. "EGauge." EGauge Center. Accessed May 02, 2017. <http://egauge13715.egauge.us/57A4C/>.

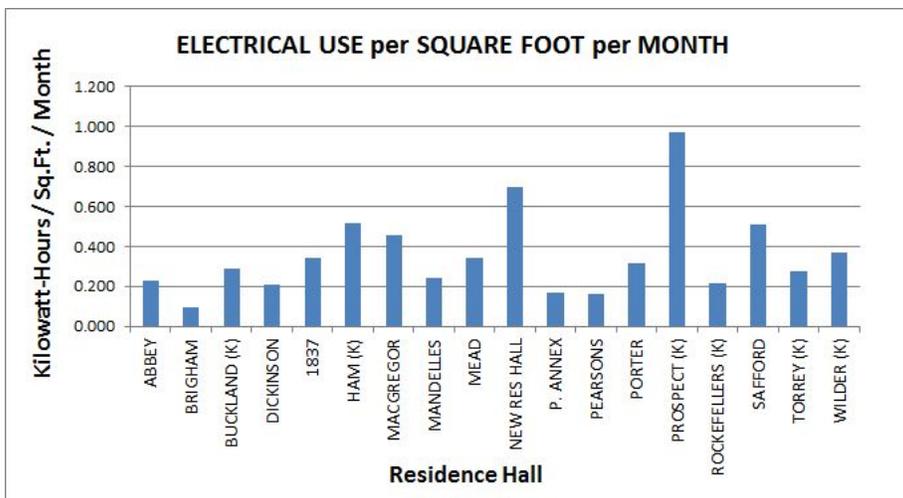
⁵ "25 of the Most Energy Efficient Colleges – Electric Choice." *Electric Choice*. N.p., 27 Jan. 2016. Web. 10 Apr. 2017.

⁶ *Colleges and Universities Managing Energy Costs in Colleges and Universities*. N.p.: National Grid, 2003. Web. 10 Apr. 2017.

- In Massachusetts, Governor Deval Patrick's Executive Order 484, "Leading by Example – Clean Energy and Efficient Buildings, states that government buildings, including all state universities are to adopt clean energy practices and reduce their environmental impact. ⁷ UMass Amherst is a leading force in energy efficiency and sustainable practices.
- Mount Holyoke College, being a private institution, is not required to meet these regulations set by the state government. It is the responsibility of the administration to promote energy efficiency and sustainable practices that align with state initiatives in private institutions. The Massachusetts Executive Office of Energy and Environmental Affairs published a resource titled " Campus Sustainability Best Practices: A Resource for Colleges and Universities". This resource provides information about how other colleges and universities are making strides for a more efficient campus, highlighting individual successes. - OK

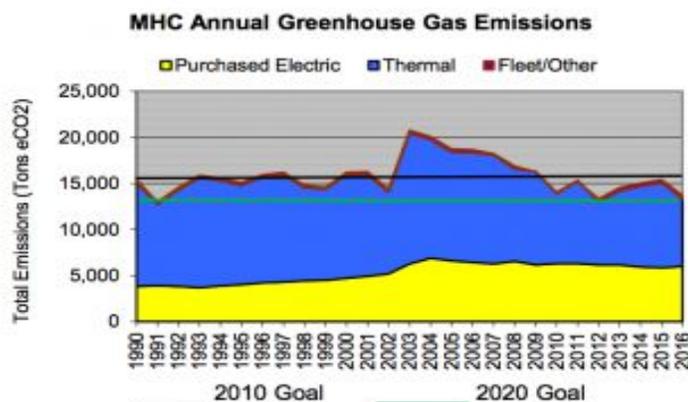
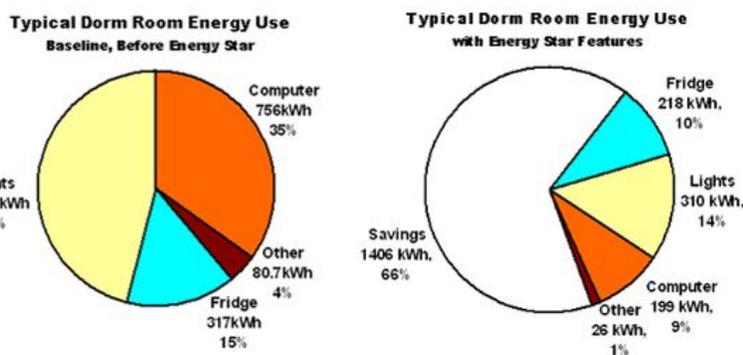
MHC dorm energy consumption:

- Joanne Creighton Hall consumed approximately 371,608 kWh of electricity within the last year, the highest across all dorms.⁸-JT
- In terms of gas consumption, North Rockefeller uses up to 4,935,400 in cubic feet, which is the highest for all dorms.⁹
- Over the course of a year Mount Holyoke has produced upwards of 934,000 kWh in electricity, which brought the college an estimated savings of approximately \$84,000.² However, Mount Holyoke has used approximately 14 million kWh-JT
- The figure to the right shows the electrical use per sq. ft per mth for all halls for the year '10 to '11 with Prospect and Creighton showing the highest usage.-JT (Figure 3 taken from excel consumption spreadsheet on moodle)



Our actions speak louder than words:

- War of the Watts is an annual Mount Holyoke inter-hall electricity conservation competition. The residence hall that reduces its electricity use the most during the two week period wins.¹⁰ Wilder hall was the winner of 2017, reducing energy consumption by 36%. - XL
- MHC Residence Halls are EnergyStar zones. Residential Life supplies free LED light bulbs for students to move our residence halls from the "before" to the "after" picture (chart on the right).¹¹ - XL¹²
- MHC has upgraded insulation in resident halls, removed 12 low volume units vending machines, and undertook the retrofit of the gymnasium lighting to decrease campus's greenhouse gas emissions.¹³ - XL
- Most of our residence halls are heated by steam, except Safford and Creighton hall, which are use a circulating hot water heating system. The school turns down the heating system during the night to save energy during winter.- XL
- Mount Holyoke has developed and maintains a Greenhouse Gas Inventory of direct emissions of greenhouse gases, electrical use, fuel use for heating, and fuel use for fleet transportation going back to 1990. MHC met its 2010 Greenhouse Gas climate action goal of returning to 1990 emission levels by 2010. - XL



⁷ United States. Massachusetts. Executive Office of Energy and Environmental Affairs. *Campus Sustainability Best Practices: A Resource for Colleges and Universities*. By Deval L. Patrick, Timothy Murray, and Ian A. Bowles. N.p., Aug. 2008. Web. 2017.

⁸ "Electrical Power on Campus-just facts." *Mount Holyoke College*. Web. 10 Apr. 2017

⁹ "Consumption data." *Mount Holyoke College Facilities Management*. Requested and received 7 Apr. 2017.

¹⁰ "War of the Watts." *Mount Holyoke College*. N.p., 07 Feb. 2017. Web. 10 Apr. 2017.

¹¹ "Living Green at Mount Holyoke." *Mount Holyoke College*. N.p., 28 Sept. 2016. Web. 10 Apr. 2017.

¹² "Living Green at Mount Holyoke." *Mount Holyoke College*. N.p., 28 Sept. 2016. Web. 10 Apr. 2017.

¹³ "Energy and Climate Change." *Mount Holyoke College*. N.p., 07 Feb. 2017. Web. 10 Apr. 2017.