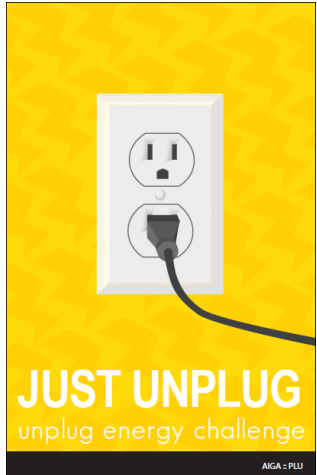



# FACILITY ACTION PLAN


FACILITY Stuen Hall		SITE ID STUEN	DATE 5/5/2010
CURRENT ENERGY USE INDEX (EUI) 123 kBtu/Sq Ft 11.5 kWh/Sq Ft Note: Stuen is high because boilers heat the Ordal as well.	TARGET EUI 90 kBtu/Sq Ft 10.6 kWh/Sq Ft	AVERAGE EUI (BENCHMARK) FOR THE FACILITY TYPE 91.09 kBtu/Sq Ft * 5.33 kWh/Sq Ft	
FACILITY LIASON(S) Rebecca Rumpza Residential Life Facilities Coordinator	FACILITY RCM TEAM MEMBERS (NAME AND POSITION) Christine Cooley Sustainability Coordinator		

POTENTIAL CONSERVATION MEASURES, OPERATIONAL IMPROVEMENTS, OR MODIFICATIONS	
MEASURE SUMMARY (LIST HIGH PRIORITY MEASURES FIRST)	FOLLOW UP BY (PERSON AND DATE)
1. Install occupancy sensors	CED contractors – July 30 <sup>th</sup> , 2010
2. Upgrade lighting	CED contractors – July 30 <sup>th</sup> , 2010
3. unPLUg	Rebecca Rumpza – July 30 <sup>th</sup> , 2010
4. Upgrade the toilets and install aerators	Bruce Broussard – October 1 <sup>st</sup> , 2010
5. Add insulation	Lyle Kendal – August 1 <sup>st</sup> , 2010
6. Install weather stripping	Bruce Broussard – October 1 <sup>st</sup> , 2010
7. Replace both boilers	Waiting for federal appropriations
8. Upgrade the control system to DDC	Waiting for federal appropriations
9. Install dedicated electric heat pump domestic hot water heaters	Dave Kohler – December 1 <sup>st</sup> , 2012

DETAILED MEASURE DESCRIPTIONS / NEEDS (OPTIONAL)

DESCRIPTION	INSERT PHOTO HERE (OPTIONAL)
<p>1. Install occupancy sensors for lighting control. Total of 15 occupancy sensor switches in the hallways and study lounges.</p>	<p>RESOURCES REQUIRED \$3,092.00 (McKinstry estimate) ACCOUNTABLE PARTY Chrissy Cooley, Sustainability Coordinator SCHEDULE FOR COMPLETION August 1<sup>st</sup>, 2010</p>
<p>2. Upgrade the T12 lighting to T8 in all hallways and lounges. See the lighting survey from CED for exact retrofits. Projected to save 170,000 kWh annually.</p>	<p>RESOURCES REQUIRED \$9,000 (McKinstry estimate) ACCOUNTABLE PARTY Chrissy Cooley, Sustainability Coordinator SCHEDULE FOR COMPLETION August 1<sup>st</sup>, 2010</p>
<p>3. unPLUG is an energy awareness competition primarily for educating student residents about phantom power, as well as the relationship between energy and environment. By competing throughout the year, the 2009-2010 Stuen residents saved over 230,000 from the previous year. We are hoping that with improvements in the programming, an even better electric savings, as well as natural gas and water, will be realized in 2010-2011.</p> 	<p>ACCOUNTABLE PARTY Chrissy Cooley, Sustainability Coordinator SUPPORT STAFF Office of Residential Life SCHEDULE FOR COMPLETION Competition months are October and November 2010, and March and April of 2011</p>
<p>4. Upgrade the toilets to 1.28 gpf model, urinals to 1/ 8 gpf and install 0.5 gpm aerators on faucets. (24 toilets and 26 faucets)</p> 	<p>RESOURCES REQUIRED \$61,157.00 (McKinstry estimate) Needs Maintenance review; may be possible in house ACCOUNTABLE PARTY Bruce Broussard, Maintenance Manager SUPPORT STAFF Ross Winters, Campus Plumber SCHEDULE FOR COMPLETION Will be reviewed by October 15<sup>th</sup></p>

<p>5. Add insulation in the attic spaces. (9,500 SF R-38 batt insulation in the attic)</p>	<p><b>RESOURCES REQUIRED</b>            \$52,665.00 (McKinstry estimate)            Obtain quote  <b>ACCOUNTABLE PARTY</b>            Lyle Kendal, Project Coordinator  <b>SCHEDULE FOR COMPLETION</b>            Obtain quote by August 30<sup>th</sup>, 2010</p>
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<p>6. Install weather stripping to the exterior windows and doors. Seal the roof/ wall intersection. (560 ft of wall/ roof intersection, 38 bay windows (3.5'x5' + 5'x5' + 3/5'x5'), 30 7'x5' windows, 45 7'x4' windows and 60 3'x3' windows, 4 exterior single doors)</p> 	<p><b>RESOURCES REQUIRED</b>            \$170,610.00 (McKinstry estimate)            Needs examined by the Maintenance staff  <b>ACCOUNTABLE PARTY</b>            Bruce Broussard, Maintenance Manager  <b>SCHEDULE FOR COMPLETION</b>            Examined by October 15<sup>th</sup>, 2010</p>
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<p>7. Replace both boilers with (3) 2,000 MBH each new ultra high efficiency Hydrotherm KN20 condensing boilers.            -- or --            Replace both boilers entirely with geothermal heat pump system. Wells to be installed near Eastvold. Currently</p> <p>Decision will be based upon the outcome of federal appropriations.</p>	<p><b>RESOURCES REQUIRED</b>            \$398,006 (McKinstry estimate for new boilers)            Decision hinges on federal appropriates to be divided in the next 2 years</p>
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<p>8. Upgrade the control system to Direct Digital Control system. (114 radiators, 2 HW boilers with 3 pumps, 4 EF's, 2 HX for DHW with 1 circ pump each, 1 AHU with htg coil and 1 circ pump)</p>	<p><b>RESOURCES REQUIRED</b>            \$334,560.00 (McKinstry estimate)  <b>ACCOUNTABLE PARTY</b>            Dave Kohler, Facilities Management Director  <b>SCHEDULE FOR COMPLETION</b>            May be done simultaneously with the removal of the current boilers</p>
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<p>9. Install dedicated electric heat pump domestic hot water heaters to replace the existing East and North storage tanks. Shut off the main boilers to save on standby and distribution energy loss. (Install Qty of 6 Stiebel-Eltron Accelera heat pump DHW heaters in the attic space)</p>	<p><b>RESOURCES REQUIRED</b>            \$143,935.00 (McKinstry estimate)            Needs to be listed on the Capital Projects list  <b>ACCOUNTABLE PARTY</b>            Dave Kohler, Facilities Management Director  <b>SCHEDULE FOR COMPLETION</b>            January 20<sup>th</sup>, 2013</p>
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