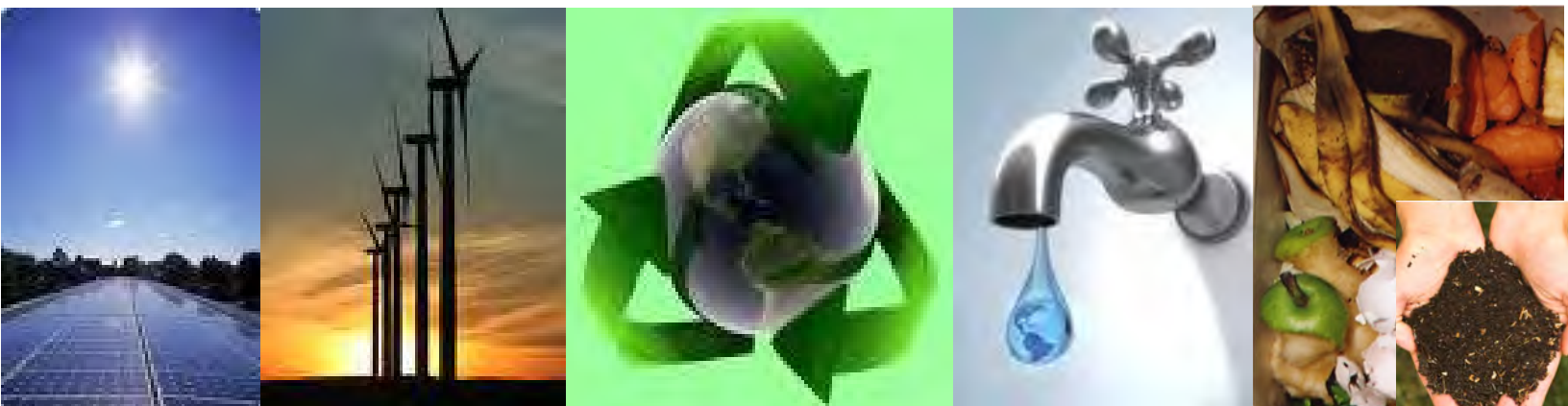




Georgian Court University
Environmental Assessment:
Green MOU SemiAnnual Report
April 12, 2013



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Region 2

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Accomplishments

Reductions of 8,073 MTCO₂e



Memorandum of Understanding

On March 12, 2012, Georgian Court University signed a Memorandum of Understanding (MOU) pledging to become an environmental steward by implementing a number of green initiatives that would reduce its carbon footprint and further improve our planet's environment. This partnership with the United States Environmental Protection Agency (EPA) and Georgian Court University has resulted in reducing energy, water and solid waste production across their entire operations.

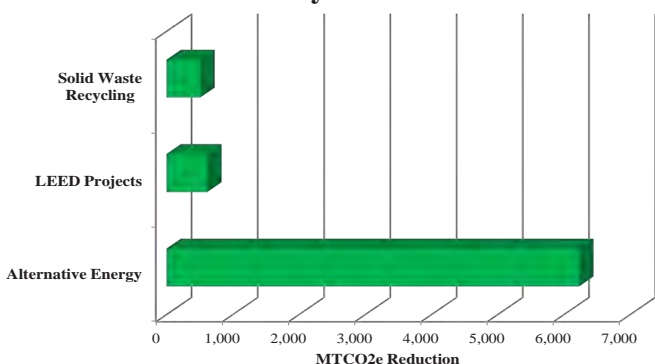
Reduction in Environmental Footprint

This is the second update Georgian Court University has provided documenting its green initiatives. The EPA has analyzed the submitted information and generated an environmental footprint. Due to the progressive green efforts of the organization, Georgian Court University has managed to reduce its carbon footprint by 8,073 MTCO₂e* and saved an estimated \$265,000 in operating expenses.

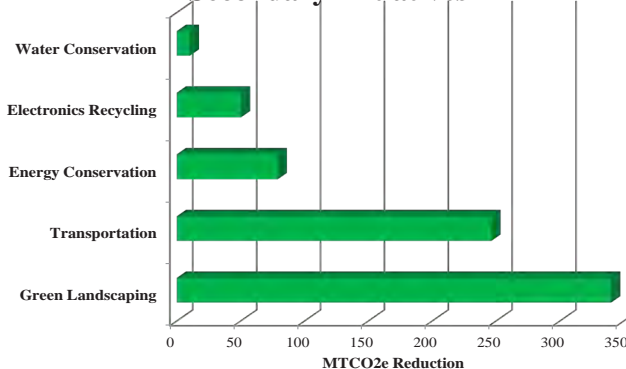
*Metric Ton Carbon Dioxide Equivalent

Environmental Metrics	Total Sector (MTCO ₂ e)
Energy Conservation	79.0
Alternative Energy	6,228.6
Water Conservation	10.2
Solid Waste Recycling	509.6
Green Landscaping	340.1
Electronics Recycling	47.0
Transportation	246.3
LEED Projects	613.2
Total (MTCO₂e)	8,073.9

Primary Initiatives



Secondary Initiatives



Measurement and Continuous Improvements

EPA uses these environmental conversion models to calculate metric tons of carbon dioxide equivalents:

Greenhouse Gas Equivalencies (GHG) Calculator converts GHG reductions into scenarios that can be easily communicated to the public.

eGRID Version 1.1 (2007) and the EPA Pollution Prevention (P2) GHG Conversion Tool which convert standard metrics for electricity, green energy, fuel use, chemical use, water use, and sustainable materials management into MTCO₂e.

The EPA WARM Model which helps calculate GHG emission reductions from several different waste management practices, including source reduction, recycling, combustion, composting and landfilling.

The EPA Pollution Prevention (P2) Cost Calculator estimates cost savings associated with GHG reductions.

Certain environmental data points cannot be converted to MTCO₂e because scientific models do not currently exist.

As methodologies improve, environmental assessments will be updated to include any new GHG reduction estimates.

Accomplishments

Reductions of 8,073 MTCO₂e

Greenhouse Gas Equivalencies

What does the reduction of 8,073 MTCO₂e represent ?
 The organization's effort is equivalent to any one of the following:

- Annual greenhouse gas emissions from 1,682 vehicles



- Carbon dioxide emissions from 905,146 gallons of gasoline



- Carbon dioxide emissions from 18,777 barrels of oil consumed



- Carbon dioxide emissions from the energy use of 416 homes for one year



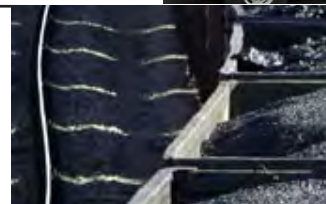
- Carbon dioxide emissions from 336,413 propane tanks used for home barbeques



- Carbon dioxide emissions from gasoline carried by 106 tanker trucks



- Carbon dioxide emissions from burning 34.7 railcars' worth of coal (over 1/2 mile long)





Environmental Metrics	Mar 2012 MOU	Sep 2012 Update	Mar 2013 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Energy Conservation/Energy Star					
Total Savings (MTCO2e)	25.9	25.9	27.3	79.0	\$18,698
Miscellaneous Energy Conservation					
Web Based Energy Competition					
Motors and Transformers					
Lighting Project Fixtures (bulbs and ballast)					
High Temp Hot Water Pipe Replacement					
HVAC, Chiller & Electrical					
Bulb Replacement (CFLs)	200 bulbs	200 bulbs	260 bulbs	12.3	\$2,067
Bulb Replacement (LEDs)	600 bulbs	600 bulbs	612 bulbs	43.7	\$7,379
Gas Savings					
Fuel Oil Savings	750 gal	750 gal	750 gal	23.0	\$9,252
Steam Savings					
Alternative Energy					
Total Savings (MTCO2e)	2146.5	2041.1	2041.1	6,228.6	(\$1,391)
On-Site Solar (855 KW)	427.5 kwh	427.5 kwh	427.5 kwh	1.0	\$161
On-Site Wind					
On-Site Geothermal					
On-Site Combined Heat and Power					
Purchase of Green Energy/Green Power	2,891,000 kwh	2,749,000 kwh	2,749,000 kwh	6,227.6	(\$1,552)
Water Conservation/WaterSense					
Total Savings (MTCO2e)	3.4	3.4	3.4	10.2	\$2,253
Miscellaneous Water Conservation					
Low Flow/Hands Free Faucets					
Low Flow Toilets (30)	60,000 gal	60,000 gal	60,000 gal	0.4	\$366
Low Flow Shower Heads (28)	32,200 gal + 4200 kwh	32,200 gal + 4200 kwh	32,200 gal + 4200 kwh	9.6	\$1,775
Low Flow Urinals (8)	18,400 gal	18,400 gal	18,400 gal	0.1	\$112
Waterless Urinals					
Solid Waste Recycling					
Total Savings (MTCO2e)	89.3	189.5	230.8	509.6	\$6,362
Mixed Recyclables (includes Wastewise)					
Pallets Waste Avoided / Wood Recycled		125 lbs	125 lbs	0.3	\$5
Steel Recycled Offsite during Deconstruction					
Concrete / Asphalt Recycled during Deconstruction		12.5 tons	12.5 tons	13.1	\$1,000
Recycled C&D Waste (construction waste)					
Cardboard (construction/non-construction/sharp containers)	5.7 tons	5.7 tons	10.45 tons	67.7	\$874
Mixed Metal (construction/non-construction)		15 tons	15 tons	162.0	\$1,200
Paper, Mixed	15.24 tons	15.24 tons	27.9 tons	204.9	\$2,335
Plastic, Mixed (bottles,construction/non-construction,sharp containers)		2.2 tons	2.2 tons	6.6	\$176
Can / Bottle Recycling	2.4 tons	2.4 tons		36.3	\$192
Blue Wrap Waste Reduction					
Mixed Organics		5.626 tons	5.626 tons	2.3	\$450
Food Donation (Waste diversion)					
Biosolids and Food Waste Recycling / Composting					



Environmental Metrics	Mar 2012 MOU	Sep 2012 Update	Mar 2013 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Fluorescent Bulbs		881 lbs	930 lbs	0.1	\$36
Ceiling Tiles Recycled					
Carpet Recycled		1 ton	1 ton	14.4	\$80
Waste Oil Recycled					
Magazines / Third Class Mail					
Newspapers					
Office Paper					
Phonebooks					
Textbooks					
Dimensional Lumber					
Fly Ash					
Aluminum Cans					
Glass					
HDPE					
LDPE					
PET					
Appliances					
Non-Ferrous Metals					
Fats, Oils, Grease					
Instrument Recycling					
Ballast		285 lbs	395 lbs	1.8	\$14
Green Procurement					
Total Savings (MTCO2e)				0.0	\$0
Re-Use/Purchase of Materials with Recycled Content					
Purchase / Use of Compost Socks					
Purchase of EPEAT Products					
Use of Recycled Steel during Construction					
Use of Recycled Iron during Construction					
Use of Recycled Plastic during Construction					
Use of Recycled Aluminum during Construction					
Use of Recycled Concrete / Asphalt during Construction					
Use of Coal Combustion Products					
Green Landscaping					
Total Savings (MTCO2e)	108.5	116.5	115.2	340.1	\$34,485
Green Roofs	2,450 sq ft	2,450 sq ft	2,450 sq ft	8.0	
Porous Pavement					
Grass					
Low / No Mow Area	272,000 sq ft	272,000 sq ft	272,000 sq ft	84.2	\$22,500
Green Space					
Re-use of Collected Stormwater	200 gal	200 gal	200 gal	0.0	\$1
On-Site Use of Compost / Mulch		20 tons	11 tons	6.2	\$1,240
Moisture Sensing Sprinklers (covers 232,000 sq ft)	1,500,000 gal	1,500,000 gal	1,500,000 gal	11.0	\$9,144
Number / Acres of Trees	20 trees	20 trees	34 trees	3.1	
Reflective Roof	97,590 sq ft	97,590 sq ft	97,590 sq ft	219.6	
Synthetic Turf					



Environmental Metrics	Mar 2012 MOU	Sep 2012 Update	Mar 2013 Update	Total Conversion (MTCO2e)	Cost Savings (est.)
Native Plants					
Leaves Composted		20 tons	20 tons	8.0	\$1,600
Electronics/EPEAT					
Total Savings (MTCO2e)		26.3	20.7	47.0	\$262
Recycling of Electronics		14 tv's, 75 printers, 3 scanners, 6 phone switches, 2 shredders,	48 printers; 5 scanners; 2 TVs	2.7	\$67
Re-Use/Donation of Used Computers		51 crt's, 21 lcd's, 19 laptops, 3 desktops, 72 towers, 23 boxes of cords, 15 keyboards	54 PCs; LCD/CRT 51; 23 laptops	5.9	\$105
Toner/Ink Recycling and Use of Recycled Ink		500 cartridges	425 cartridges	37.7	\$74
Battery Recycling		335 lbs	489 lbs	0.7	\$16
Mass Transit					
Total Savings (MTCO2e)					
Miles Avoided					
Transportation					
Total Savings (MTCO2e)	75.8	83.8	86.7	246.3	\$100,854
Hybrid Vehicles		1	1	1.9	\$1,500
Electric Vehicles		5	7	16.9	\$9,900
Biodiesel Vehicles					
Commuter Gas Savings	8500 gal	8500 gal	8500 gal	227.5	\$89,454
Clean Construction Vehicles					
LNG Vehicles					
Alternate Fuel Vehicles (Zipcar)					
Smartway Transporters					
Bike Racks		3	3		
LEED Projects					
Total Savings (MTCO2e)	204.4	204.4	204.4	613.2	\$103,496
Silver - 10%					
Gold - 17% (Wellness Center 69,510 sq ft)	275,329 kwh	275,329 kwh	275,329 kwh	613.2	\$103,496
Platinum - 20%					
MTCO2e Savings					
Total (MTCO2e)	2,653.7	2,690.8	2,729.5	8,073.9	\$265,019
Energy Conservation	25.9	25.9	27.3	79.0	\$18,698
Alternative Energy	2,146.5	2,041.1	2,041.1	6,228.6	(\$1,391)
Water Conservation	3.4	3.4	3.4	10.2	\$2,253
Solid Waste	89.3	189.5	230.8	509.6	\$6,362
Green Landscaping	108.5	116.5	115.2	340.1	\$34,485
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LEED Projects	204.4	204.4	204.4	613.2	\$103,496



2013

Georgian Court University Additional Green MOU Accomplishments

Georgian Court University continued to offset all of their electrical power use with Green e-certified Renewable Energy Certificates (RECs). GCU did replace an additional two gasoline powered vehicles with electric only service vehicles. The replaced vehicles consumed approximately 1,100 gallons of gasoline annually.

GCU continues to work to reduce power use by working 4 day weeks throughout the summer so that the cooling can be reduced for a three day weekend. They also closed the campus for 10 days over the Christmas break to reduce heating costs.

In summer 2012, Energy saving ceramic window films were installed on all W,S and E facing windows in GCU's main classroom building, which still has the original 1964 single pane glass windows in aluminum sashes (over 200 windows). They hope to see significant savings in cooling costs in this building in upcoming years.

GCU continues to participate in Recyclemania, working to both reduce overall waste production and to enhance recycling of what materials are used. They also have continued their weekly sustainability newsletter, the "Water Closet Reader," in which they educate the community about the importance of recycling, waste reduction and other issues pertaining to sustainability.

Georgian Court's dining service provider, Chartwells, continues to have a strong commitment to sustainability. In addition to the trayless eating, meatless Mondays and other campaigns, Chartwell's launched a waste inventory process in which all kitchen waste is inventoried and identified with the idea that areas where waste due to mismatches between food preparation and demand, and other preventable causes could be detected and prevented in the future.

GCU continues to manage the campus for soil health, using their vertiquake to reduce compaction, mulch mowing both grass and fall leaves and continuing their maintenance of low mow - no mow areas. Their experimental gravel rain garden collects all of the water from their main dining hall's north roof and is consistently reducing nitrates and other N- pollutants in runoff by 90-95%. GCU plans to construct a set of gravel wetlands this summer to test four different designs for storm water basins. These storm drainage holding areas will remove nutrients and other pollutants from runoff from the main parking lot on campus, serving the Arts and Sciences Building.

Hurricane Sandy did little structural damage to their campus. It did however down 90 large sized trees. These trees were removed and the wood donated to local homeless communities. GCU will be working to replace those trees with new tree plantings this year.

In addition to their usual efforts to communicate their sustainability efforts to their own community, GCU's sustainability director has provided several presentations on sustainability to local nature groups and non-profits. In addition, the campus hosted the New Jersey Environmental Federation's annual meeting on April 6, 2013.

In the future GCU is hoping to receive some of the Funds for Higher Education made available through the State Bond initiative to upgrade and renovate several spaces on campus. In that project are a number of upgrades to boilers and lighting and electrical systems which will allow GCU to further improve energy efficiency of their campus infrastructure.