

University System of Georgia Energy Efficiency & Sustainability

AEE Georgia Chapter October 28, 2013





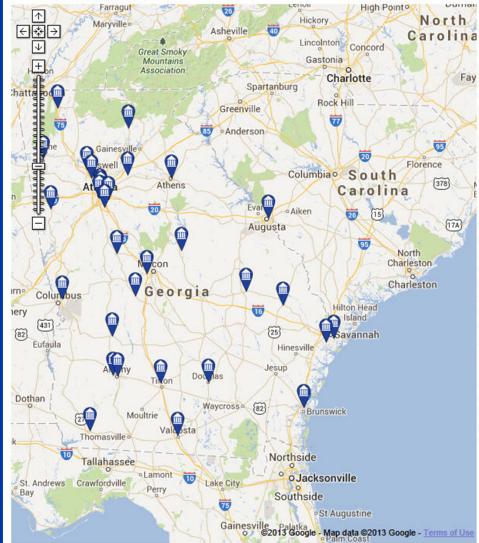
- 1. Overview of the USG
- 2. Energy Cost & Use Today
- Energy Challenge: What Have We Done & How Are We Doing?
- 4. Other Sustainability Initiatives
- 5. Your Turn to Talk



of institutions Space, total ASF % of ASF in classrooms/labs Student headcount, Fall 2013 Sandra's annual salary \$ Spent on Energy FY13 Capital Outlay, FY14 Total BTUs used, FY13 Answer to the ultimate question of life.....

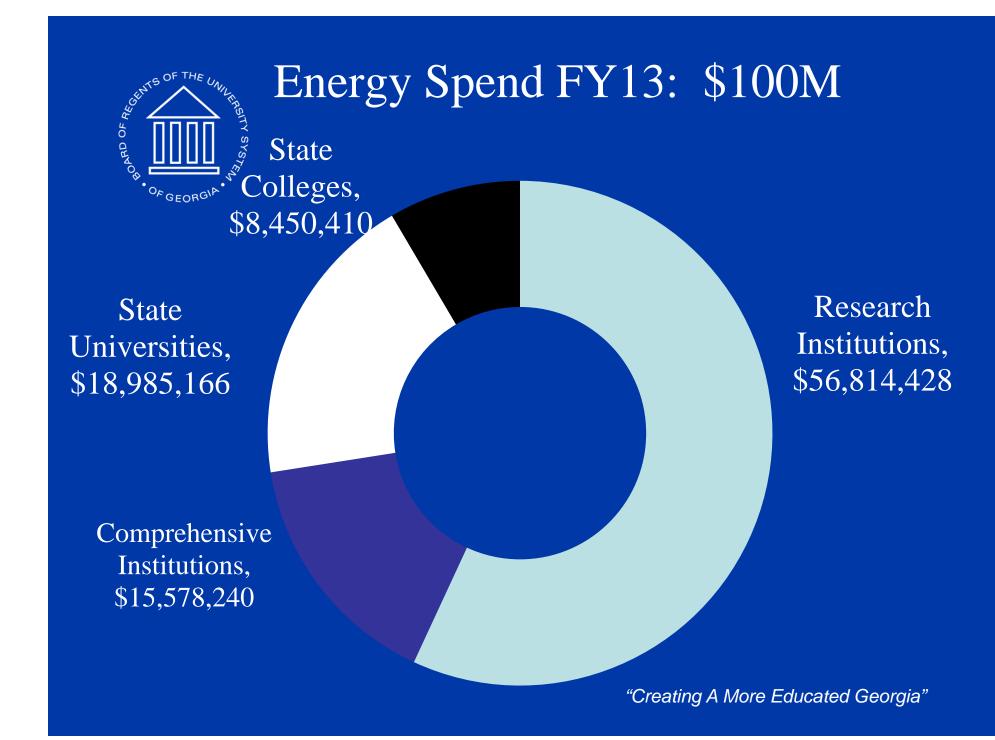


Who and Where We Are



Abraham Baldwin Agricultural College Albany State University Carolina Armstrong Atlantic State University Atlanta Metropolitan State College **Bainbridge State College** Fay Clayton State University College of Coastal Georgia **Columbus State University Dalton State College Darton State College** East Georgia State College Fort Valley State University Georgia College & State University Georgia Gwinnett College Georgia Highlands College Georgia Institute of Technology Georgia Perimeter College Georgia Regents University Georgia Southern University Georgia Southwestern State University Georgia State University **Gordon State College** Kennesaw State University Middle Georgia State College Savannah State University South Georgia State College Southern Polytechnic State University University of Georgia University of North Georgia University of West Georgia Valdosta State University

"Creating A More Educated Georgia"





Gas & Other, \$17,538,846

Energy Cost by Type

Electricity, \$82,289,398

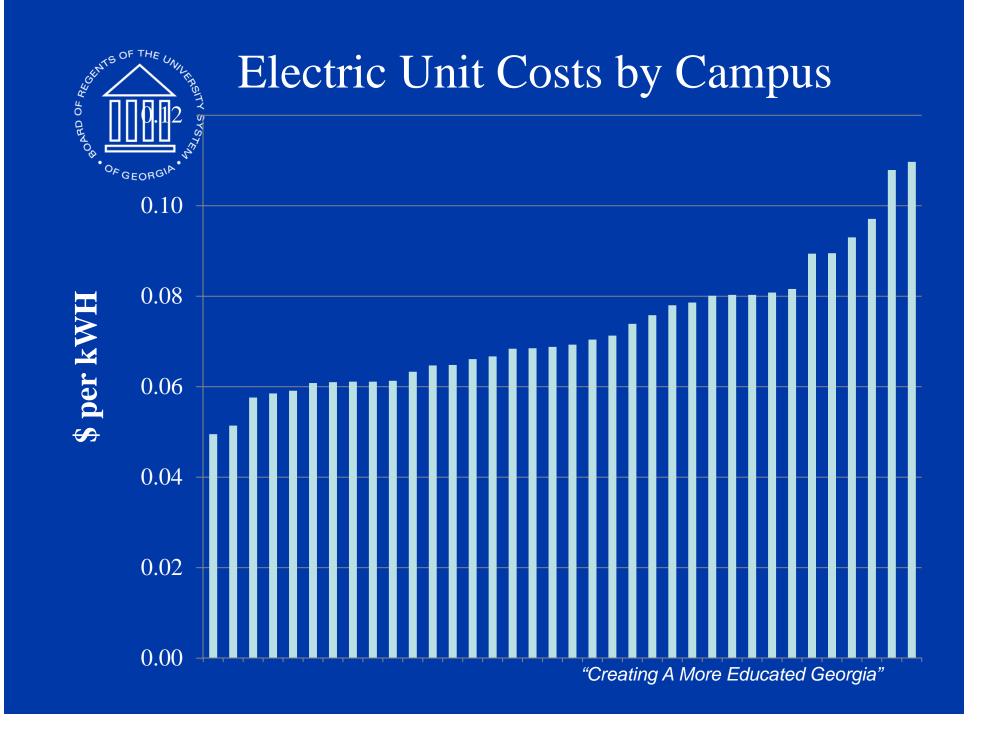


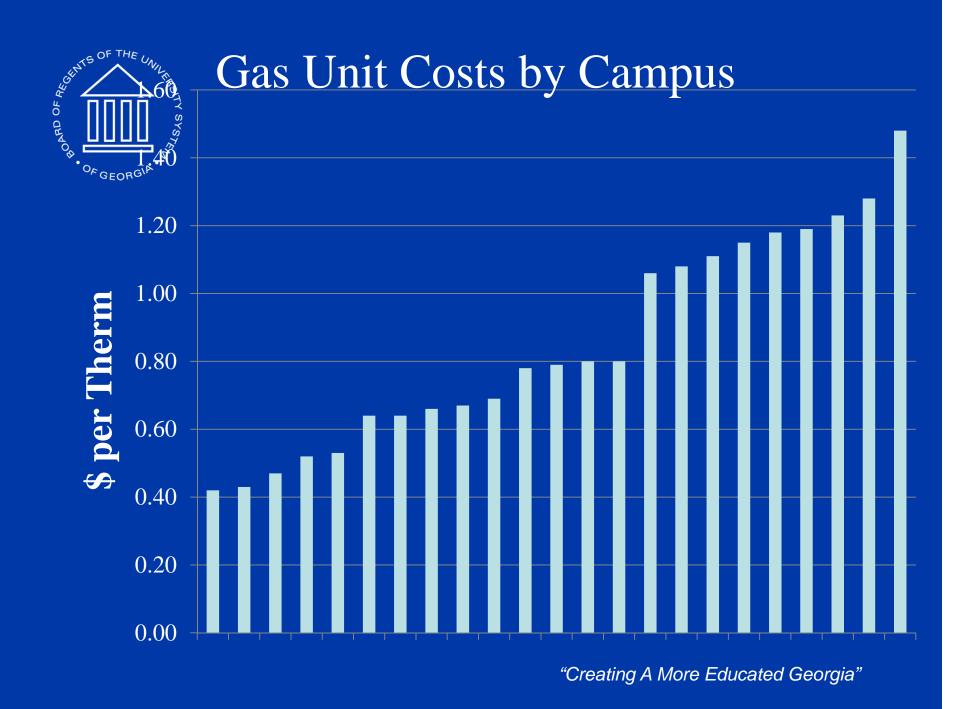
Total Energy Consumption: 6.8T BTU

\$8 per MMBTU

Gas & Other, 2,202,577 Electricity, 4,594,101

\$18 per MMBTU







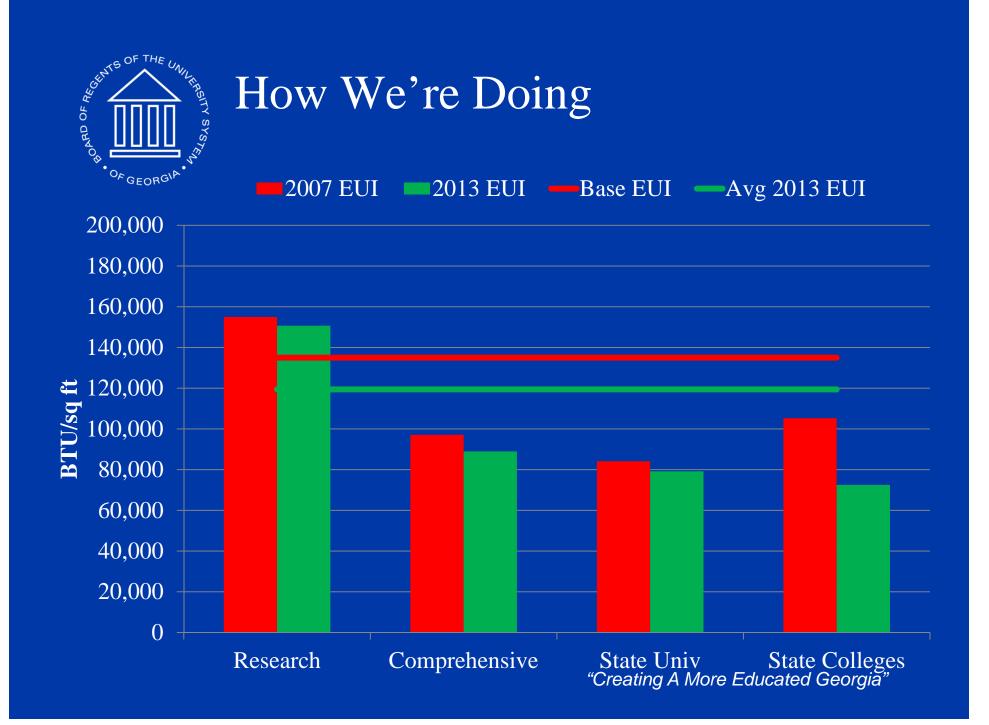
Georgia Energy Challenge

- April 2008 Executive Order
- Committed state agencies to reducing energy consumption 15% per square foot by 2020 over a 2007 baseline
- Challenged businesses, local governments and citizens to do the same
- Facilitated by GEFA



- Measured in BTU/sq ft of conditioned space
- Indicator of energy efficiency of space and operations
- NOT PERFECT
- Consistent Benchmark

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<i>S</i> i			Enter data in yellow cells only				
Institution	Kennesaw State University				Blue cells are filled automatically, DO NOT MODIFY		
Campus	Kennesaw						
Fiscal Year	2013		1				
Average Campus Gross Floor Area (Conditioned Only)	2,082,241	square feet					
Contact Name	Jodie Sweat						
Contact Email	jsweat@kennesaw.edu						
Summary Calculations			-		Water		12.0
Total Energy		MMBtu			₩ater Use	54,598,000	gallons
Net Energy	2888 (1997)	MMBtu	-		Water Cost	\$ 227,266	
Energy Cost	\$ 3,836,144	-			Sewer Cost	\$ 233,860	
Total Energy Use Intensity	0.532 (0.50)	Btulft²-yr			Total Unit Cost	0.008445836	\$/gal
Net Energy Use Intensity		Btulft ² -yr		and the second second			
Energy Cost Intensity	2000 CONTRACTOR -	\$/ft²-yr		NEW	Storm₩ater Cost	\$ -	
Water Use Intensity	26.22	gal/ft²-yr		10000			
	-		-				
	E						
Energy Type	Energy Use Numerical Value	Units	Energy, MMBtulyr	Energy Cost, \$	Unit Cost		
Energy Purchased							
Electricity	46,067,347.4		140,482.2	\$ 3,071,268	\$ 0.067		
Natural Gas	292,411.9	therms	29,241.2	\$ 764,876	\$ 2.616		
Propane	0.0	US gal	0.0	\$ -	#DIV{0!		
Steam (imported from off-site)	0.0	MMBtu	0.0	\$ -	#DIV(0)		
Hot Water (imported from off-site)	0.0	MMBtu	0.0	\$ -	#DIV/0!		
Chilled Water (imported from off-site)	0.0	MMBtu	0.0	\$ -	#DIV/0!		
#1Fuel Oil	0.0	US gal	0.0	\$ -	#DIV/0!		
#2 Fuel Oil	0.0	US gal	0.0	\$ -	#DIV/0!		
#4 Fuel Oil	0.0	US gal	0.0	\$ -	#DIV/0!		
#5L Fuel Oil	0.0	US gal	0.0	\$ -	#DI \/{0!		





- Campus Energy "Champions"
- Targeted Investments in Energy Projects
 - \$28M in ARRA \$
 - Performance Contracts??
- Best Practices
 - Submetering
 - Building Automation Controls
 - Variable Speed Drives



Other Sustainability Initiatives – Campus Operations

- Sustainability Offices/Coordinators

 UGA. GIT, GSU, KSU, SPSU, GSOU, GCSU
- Green Building Standards
 - Georgia Peach Program
 - Alternatives to LEED
 - Revisions to USG Lab Design Criteria
- Water Use Reductions



Your Turn!

What can we do better??

• Please email your ideas to sandra.neuse@usg.edu or ken.crowe@usg.edu

