

Georgia Tech's Award-Winning Renewable Cleaning Program

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2015



OUR AWARDS



- Winner of the 2006 National Association of Higher Education Facilities Officers (APPA), “Effective & Innovative Practice Award.”
- Runner up in the American School & University “Green Cleaning Award” in 2007.
- Recipient of the Georgia Tech 2008 Environmental Leadership Award.



OUR AWARDS - 2015



- Named to Princeton Review's sustainability Honor Roll in 2008, 2009, 2010, 2011, 2012 and 2013. Of nearly 700 institutions evaluated on sustainability efforts, Georgia Tech was in the top 15.



- Georgia Tech Green Cleaning Program recognized by National Wildlife Federation (2008).



WHAT IS RENEWABLE CLEANING?

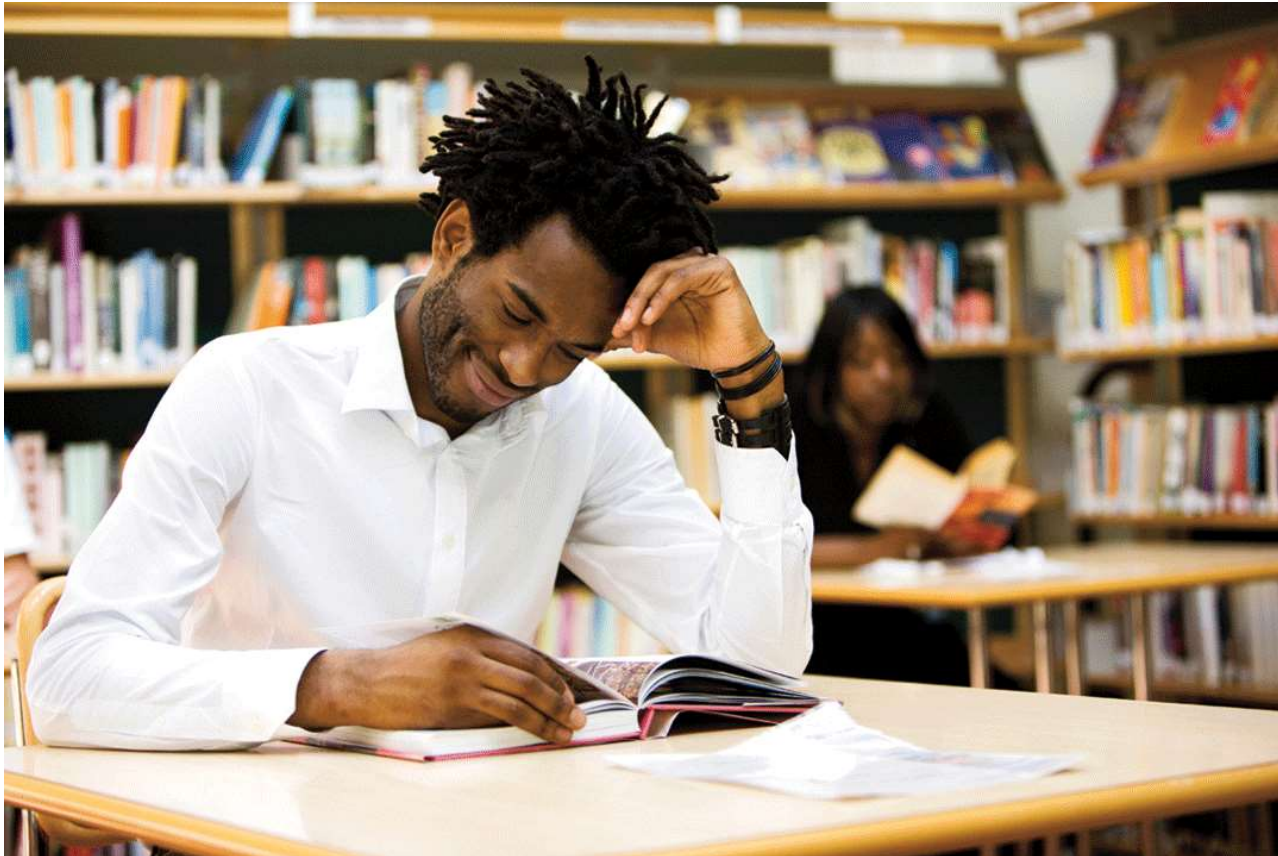
Renewable Cleaning goes beyond 'Green Cleaning'.

Renewable Cleaning leverage technology instead of traditional methods and chemicals to clean indoor environments, protect public health, and position Georgia Tech as a leader in sustainability.



IN OTHER WORDS...

Renewable cleaning is the safest, healthiest way to maintain our indoor environments.



LEVERAGE ADVANCED RENEWABLE TECHNOLOGIES

Orbital Walk Behind and Square Scrub
Floor Machines uses Ionize Water to
create cleaning solutions



Electrochemical (ECA)
devices for creating general
purpose cleaning and
sanitizing solutions on-site



Evolution of Technology

After a two year evaluation we transitioned our cleaning and sanitizing to GenEon Technologies ECA products :



- They have a products that uses the ECA Technology:
 - From table top models to Wall Mounted units that produce up to 2.5 gallons of solution every minute
 - Portable Model that create solution in large volume anywhere and anytime you need it!
- Solutions are created on-site and used in our own Spray Bottles, Mop Buckets, Powered Equipment



Evolution of Technology

Our program has evolved! We started with Activeion and used those initial success to transform our philosophy, process and methodology by leveraging technology that goes beyond Green!



- Cost for Deployment is lower with GenEon
- GenEon cleans the same areas as Activeion, but allows us to do more:
 - Toilet Bowls
 - Showers
 - Floors, etc.
- One University in Georgia was able to remediate a norovirus outbreak using GenEon.
 - Our Animal Life Science Lab is testing the solution
- GenEon creates 3 distinct solutions:
 - Sanitizer/Disinfectants
 - Glass and General Purpose Cleaner
 - Heavy Duty Cleaner / Degreaser
- Can generate solution and fill our own spray bottle, mop systems,
- We can validate solutions strengths using test strips

**BEST OF ALL...
MY STAFF LOVES IT!**



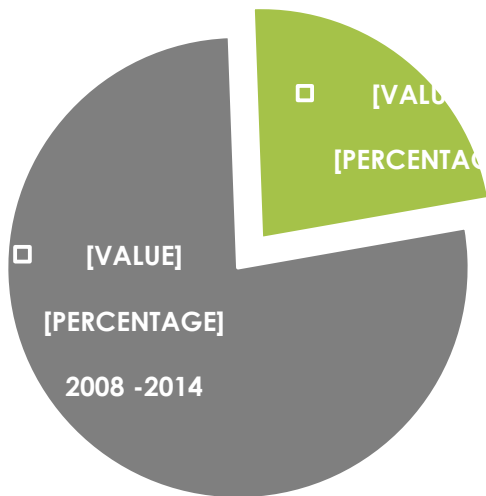
Why they love it?

- Ultimately it comes down to 'does it work as well as what I am currently using?'.
 - The Cleaners work as well or better than anything they have used
- The solutions do not dry out their skin
- Sanitizers actually eliminate odors
- Portability – they can take the Immerse-A-Clean anywhere on campus and make whatever solution they need

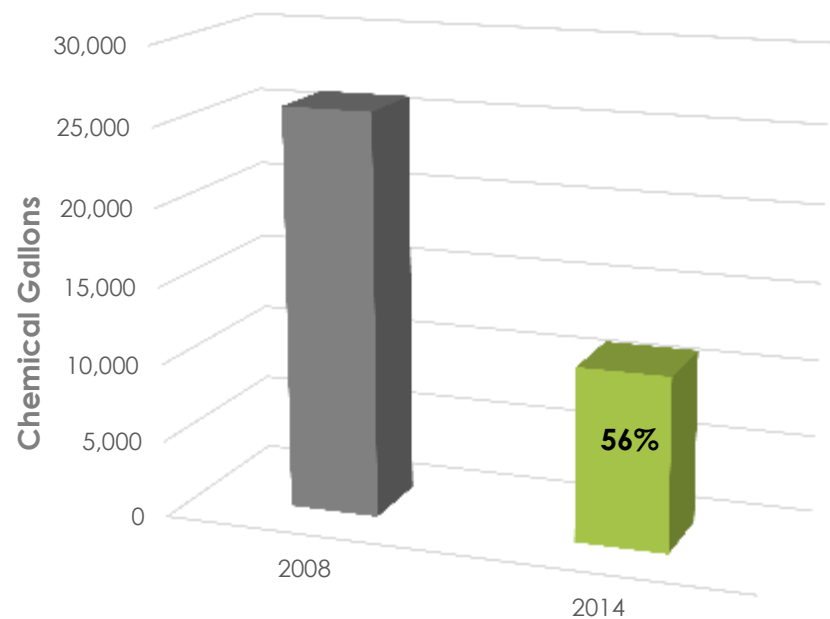


MEASURE RESULTS

Cost Savings From Chemical Reduction



56% Reduction of Chemicals on Campus over Seven Years



	2008	2014
■ Chemical Gallons	25,960	11,228

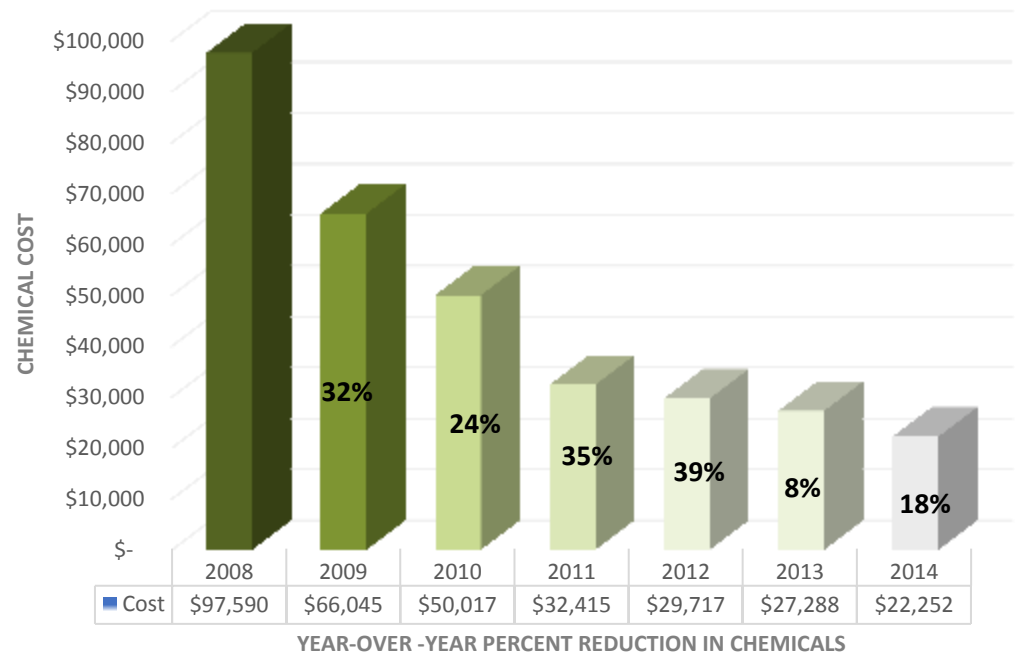
Year-over-year percent reduction in chemicals



MEASURE RESULTS

MEASURED RESULTS

- 2008—2014 chemical cost: \$683,130
- Savings over seven years: \$325,324.



HOW DIRTY IS DIRTY?

Hygiene ATP Levels of Clean (RLU)	
Ultra-Clean Sterile surfaces and food prep areas	0-10
Very Clean Critical touch points	11-30
Good Clean Floor requirement, and typical microfiber towel performance	31-80
Somewhat Dirty Caution: Surface should be cleaned and has some risk of contamination from disease-causing bacteria (typical mopping practices perform in this range)	81-200
Dirty Warning: Surface needs cleaning and has medium risk of contamination from disease-causing bacteria	201-500
Very Dirty Danger: Surface needs cleaning and has medium to high risk of contamination from disease-causing bacteria	501-1,000
Filthy Danger: Surface needs cleaning and has high risk of contamination from disease-causing bacteria	> 1,000

MEASURE RESULTS

Conduct comparative efficacy testing.

O'KEEFE BUILDING TEST AREA

	ATP Before ¹	ATP Leading Disinfectant	ATP ionator EXP ³
Men' s urinal	175	2	1
Men' s flush valve	24	3	1
Women' s toilet	96	4	2
Women' s flush valve	83	6	2
Restroom counter top	66	1	0
Training Desktop	145	6	3
Breakroom Table	99	6	3
Telephone	460	40	4
Door handle	87	12	5
Men' s Toilet	600	5	0
Computer Table	180	5	1

¹Indicates bacteria counts.

²Popular disinfectant and popular general purpose cleaner were left to sit for at least 10 minutes.

³The ionator EXP was sprayed for 6 seconds and immediately wiped.

MEASURE RESULTS

We recently conducting additional studies using solutions generated from GenEon's TRIO Rx and the MIST (the MIST is a Sprayer with adjustable spray pattern from a stream to a fine spray) with the following results:



	<u>AREA TESTED</u>	<u>ATP BEFORE</u>	<u>ATP AFTER</u>
O'Keefe	1st Floor Men's Room - Metal Door Handle	70	7
	1st Floor ROTC - Glass Door Push Panel	674	84
	1st Floor Men's Room - Plastic Paper Towel Hand Roller	602	79
	1st Floor Men's Room - Door Panel	38	9
	2nd Floor Army, Navy, Air Force - Sanitizer Push Panel	175	24
	2nd Floor - Water Fountain Button	1411	79

