



Office of Sustainability

*"Maintaining an Optimum Learning Environment,
while Maximizing Energy Efficiency and Sustainability"*

**National Academies of Sciences,
Engineering and Medicine**

July 28, 2015

UTC Sustainability - Overview

- Brief History
- Mission and Goals
- Progress to Date
 - Construction/Renovation
 - Green Power/Green Spaces
 - Emission/Waste Reduction
 - Electricity/Water Conservation
 - Student Engagement/Community Partnerships
- Operating Environment
- Questions?



UTC Overview

History:

- Original land-grant institution
- Private School until 1969
- State/Public UT System *
- 140 acres in an urban setting *
- “Dirtiest City in America”

2015:

- 11,500 + students (40% increase since 2000)
- 1,000 + faculty/staff
- 76 buildings
- 2.2 million square feet
- Best Town 2015 – Outdoor Magazine

UTC an engaged, metropolitan university, committed to excellence in teaching, research and service, and dedicated to meeting the diverse needs of the region through strategic partnerships and community involvement.

UTC Office of Sustainability

Motivation: Stewardship of Natural Resources
Stewardship of \$5.5 Million Utility Budget

2007: EDGE petition to UTC Administration

Self-imposed Student Green Fee * Established Environmental Task Force

2009: First Greenhouse Gas Inventory/Climate Action Plan

2011: Hired first full-time sustainability professional
within Department of Facilities Planning and Management *

2012: Supported 2-6 Program Assistants

2015: Approved second full-time position for Education/Outreach *

UTC Sustainable Goals



- Incorporate energy efficiency and sustainability in **green space, construction and renovation projects**, operations and maintenance;
- Minimize use of non-renewable energy sources through use of **green and alternative power**;
- Reduce greenhouse gas **emissions and landfill waste**;
- Communicate and provide support for **grassroots and academic education**.*

“Maintain an Optimum Learning Environment, while Maximizing Energy Efficiency and Sustainability”

Construction and Renovation

Tennessee Sustainable Guidelines/LEED

- Bretske Hall/new Library – LEED Silver Certified *
- Renovation/construction projects comply Guidelines
- Use of regional manufacturers (carpet, paint, flooring)
- Low VOC finishes and furnishings
- Renewable cork flooring in public spaces...and more



Recycled!

Energy Efficient Renovations

Over \$16 million in capital, stimulus, local and Student Green Fee invested since 2008

- Lighting retrofits and occupancy sensors
- Exterior doors, window and roof replacement
- Central Energy Plant improvements
- Building HVAC improvements/HLR Technology *
- Automated irrigation

Green Power

Each year, the UTC Student Green Fee purchases

6,000,000 kilowatts of Green Power

Generated by wind and hydro-electric energy sources
in the Tennessee Valley Authority Region.

- TVA 2012 University Green Power Leadership Award
- TVA Green Power Provider/ESRI Rebate Recipient
- Net-zero Test Track Facility
- Solar Power (Challenger Center) *



Green Spaces

- New Library Green Roof
- TreeCampus USA Designation
- State-certified Arboretum
- Chamberlain Field Renovation
- Paved Pervious Walkways
- Landscape Master Plan
- Light Pollution Reduction
- University Greenway
- Sustainable Garden *
- Stormwater Management *



Emissions – Waste Reduction

Alternative Transportation*

- Annual shuttle ridership = 62,800
- Fleet of 21 electric vehicles
- BikeShare Chattanooga
- Bicycle Racks

Food Services*

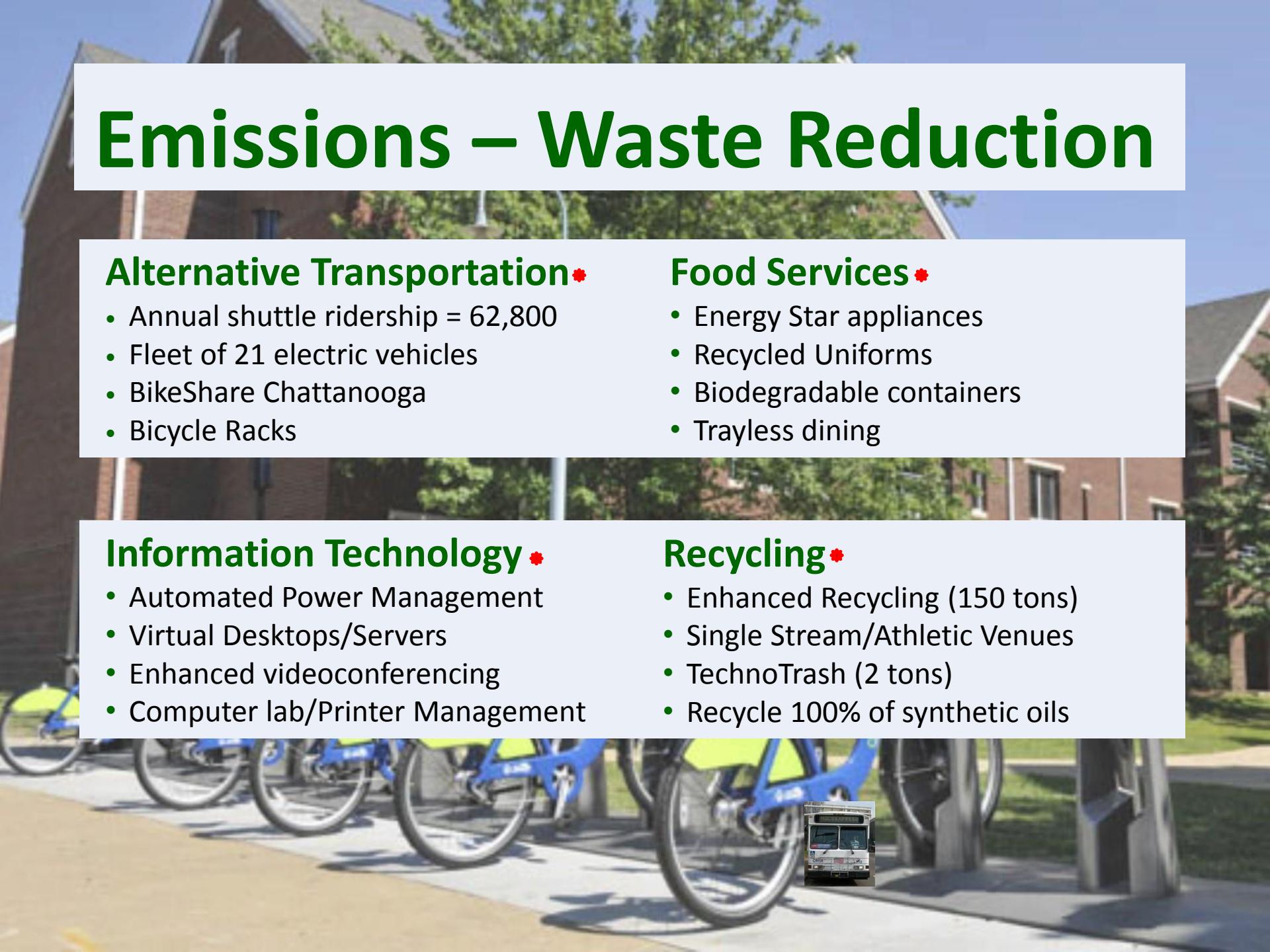
- Energy Star appliances
- Recycled Uniforms
- Biodegradable containers
- Trayless dining

Information Technology*

- Automated Power Management
- Virtual Desktops/Servers
- Enhanced videoconferencing
- Computer lab/Printer Management

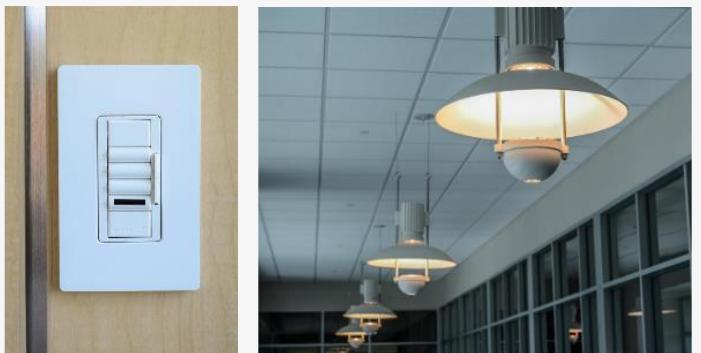
Recycling*

- Enhanced Recycling (150 tons)
- Single Stream/Athletic Venues
- TechnoTrash (2 tons)
- Recycle 100% of synthetic oils



Electricity/Water Conservation

- Underground cisterns with 48,000 gallon capacity to hold rainwater/HVAC condensate
- Stormwater Management Master Plan (draft)
- Automated irrigation system
- 8 Bottle refill stations
- Low-flow plumbing fixtures *



- Energy-efficient T8 and LED retrofits *
- Pedestrian, parking lot and parking garage retrofits planned for 2016
- Classroom Occupancy sensors
- “Smart” ballasts to automatically respond to daylight in select areas
- HLR Technology/BAS Controls *

Student Engagement/ Community Partnerships

- Multiple, on-going Campus and Community Partnerships
- Integration of Sustainability into various disciplines: ** HHP Sustainability/Farm to Fork; Interior Design; Engineering; Construction Management; Environmental Sciences; Communication; English*
- Interdisciplinary Minor
- Green Light UHON Project
- Student Campus and Community Service Opportunities
- Earth/Campus Sustainability Week
- Grants and Research

**YOUR
Student Green Fee
AT WORK!**

- Recycling
- Green Power
- Energy Efficiency
- Bottle Refill Stations
- Alternative Transportation
- And more...

 
UTC SUSTAINABILITY
UTC.EDU/SUSTAINABILITY



Operating Environment

State/Public UT System

- * Capitol Project Cycles/\$\$
- * LEED Certification
- * Procurement/Contracting

Urban Setting

- * Commuting Patterns
- * Gardens/Composting
- * Limited Green Spaces

Occupant Comfort

- * Low-flow plumbing fixtures
- * Occupancy Sensors
- * Temperature

Perceptions

- * 24/7 Operations
- * Defining Sustainability
- * Transportation

Contract Services

- * Custodial/Recyling
- * Food Services
- * Print Services

University Culture

- * Athletic Venues
- * FPM/Academic Division
- * Antiquity

Questions?

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**Unless someone like you cares a whole awful lot,
Nothing is going to get better. It's not."
— Dr. Seuss, from The Lorax**

