

GREEN+: THE KENTUCKY COMMUNITY AND TECHNICAL COLLEGE SYSTEM SUSTAINABILITY INITIATIVE

National Webinar Presentation

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Prepared by:

Billie Hardin, Sustainability Project Manager



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KCTCS MISSION

The mission of KCTCS is to improve the employability and quality of life of Kentucky citizens as the primary provider of:

- College and Workforce Readiness.
- Transfer Education.
- Workforce Education and Training.



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KCTCS VALUES

- Responsiveness to students, employers, and communities
- Access with innovative and flexible delivery
- Trust, respect, and open communication
- Continuous improvement
- Inclusion, multiculturalism, and engagement



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2010-16 KCTCS STRATEGIC GOALS

- Advance excellence and innovation in teaching, learning, and service
- Cultivate diversity, multiculturalism and inclusion
- Increase student access, transfer, and success
- Enhance the economic and workforce development of the commonwealth
- Expand the recognition and value of KCTCS



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KCTCS PROFILE

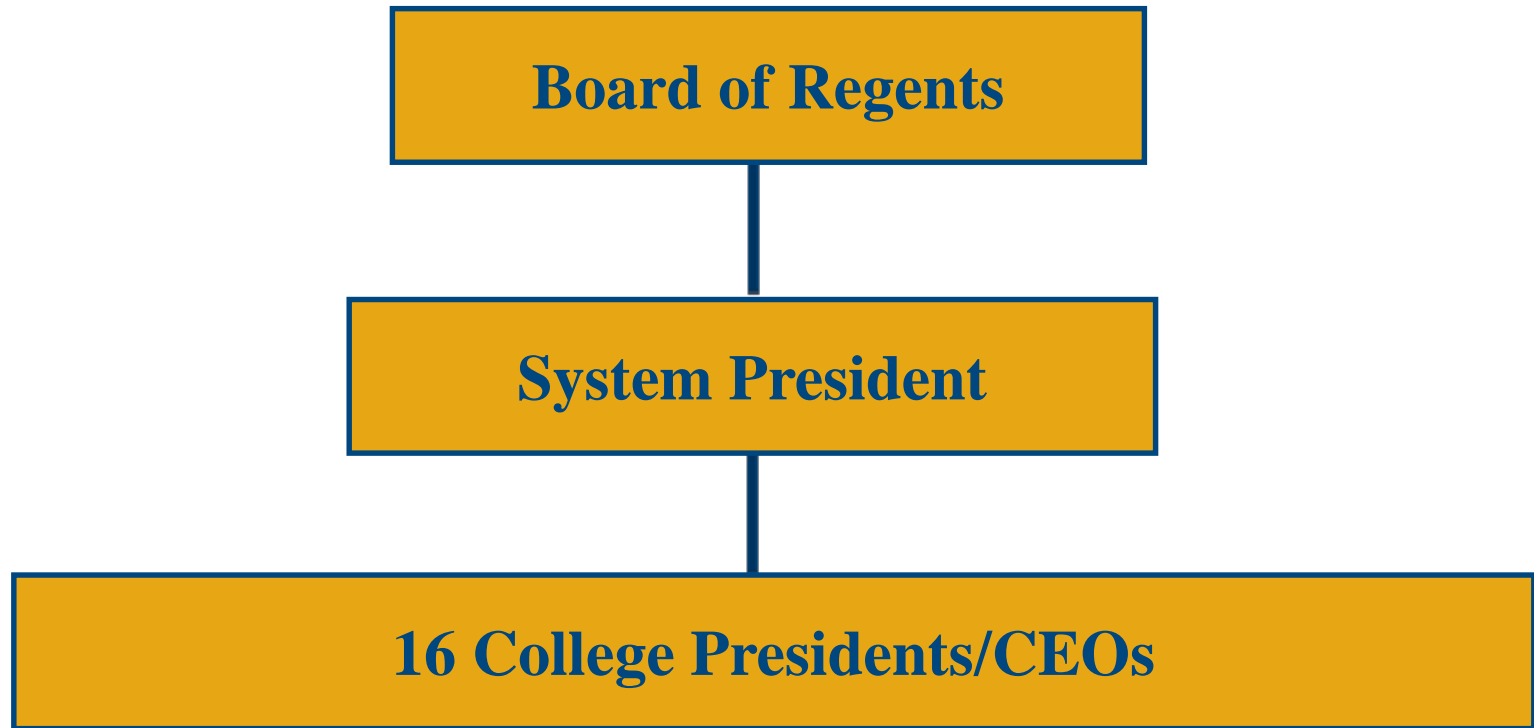
FALL 2012

- Created in 1997
- 16 colleges; 73 campuses/locations
- KY's largest provider of postsecondary education
 - 600 credit program options
 - 96,914 credit-seeking students, increased approximately 84% since 1999
 - ~ 92 percent of students receive financial aid, totaling \$242 million (Fall 2011)
 - ~10,000 Full & Part Time Employees



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KCTCS ORGANIZATIONAL STRUCTURE



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KCTCS PHYSICAL PLANT

KCTCS infrastructure totals 8.7 million gross square feet:

- KCTCS-owned space
 - Totals approximately 7.7 million gross square feet
 - Education and program space owned comprises approximately 7.5 million square feet in 358 buildings
- KCTCS free or leased space
 - Totals approximately 1.0 million gross square feet in 298 buildings
 - Education and program space free or leased comprises approximately 0.5 million square feet



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KCTCS PHYSICAL PLANT

Since inception in 1997, authorization received for 45 new state funded construction projects or major renovation projects, totaling approximately \$500 million

- 33 projects completed between 1998 and 2008, having approximate total scope of \$276 million
- 11 projects completed during the 2008-10 biennium, having approximate total scope of \$200 million
- 1 project completed in the 2012-14 biennium



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KCTCS GREEN+ FRAMEWORK DEVELOPMENT

1998-2014 – Completed 45 capital construction or major renovation projects authorized by the General Assembly

2004 – Became the second higher education in Kentucky to engage in Energy Savings Performance Contracting. Since that time the Board of Regents has requested regular updates on sustainability

2008-09 – Appointed, KCTCS Chancellor, to the American Association of Community Colleges Sustainability Task Force that developed a sustainability strategic plan and Green Mission for its member colleges

Fall 2010 – Reallocated staff due to retirements and changing needs.

December 2010 – Sustainability Contacts appointed by the KCTCS President's Leadership Team



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DRIVING FORCES

- **Economics**

- Sustainable economic development – **Green Jobs**
- Budget

- **Environment**

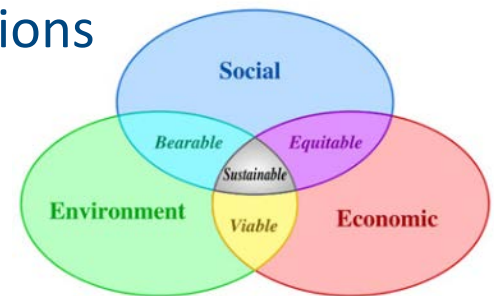
- Indoor
 - Air quality
 - Learning environment
 - Productive work environment
- Outdoor
 - Pollution
 - Landfill capacity
 - Ecological stewardship
 - Resource management

- **Energy**

- Electric utilities (rate structures)
- Limitation of nonrenewable energy
- Global energy demand

- **Stakeholders**

- Customers
- Vendors
- Government
- Future generations



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RELATED STATE STATUTES – SELECT EXAMPLES

Area	Kentucky Revised Statute
Energy Efficiency	KRS 56.770, KRS 56.777, KRS 56.782, KRS 164A.580, KRS 56.775, KRS 45A.615, KRS 45A.351, KRS 45A.352
Energy	KRS 42.580 to KRS 42.588 and KRS 152.710 to 152.720
Green Purchasing	KRS 45A.645, KRS 45A.500 to KRS 45A.540
Pollution	KRS 224.46-305, KRS 224.46-310, KRS 224.46-315, KRS 224.46-320, KRS 224.46-325, KRS 224.46-330, KRS 224.46-335, KRS 224.46-510, KRS 224.46-520
Recycling	KRS 224.10-650, KRS 224.10-660, KRS 224.10-620, KRS 45A.520, KRS 160.294, KRS 141.390
Education	KRS 157.900, KRS 157.905, KRS 157.910, KRS 157.915

DEFINITION

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Social Criteria:

Socially desirable (equitable)

Psychologically nurturing

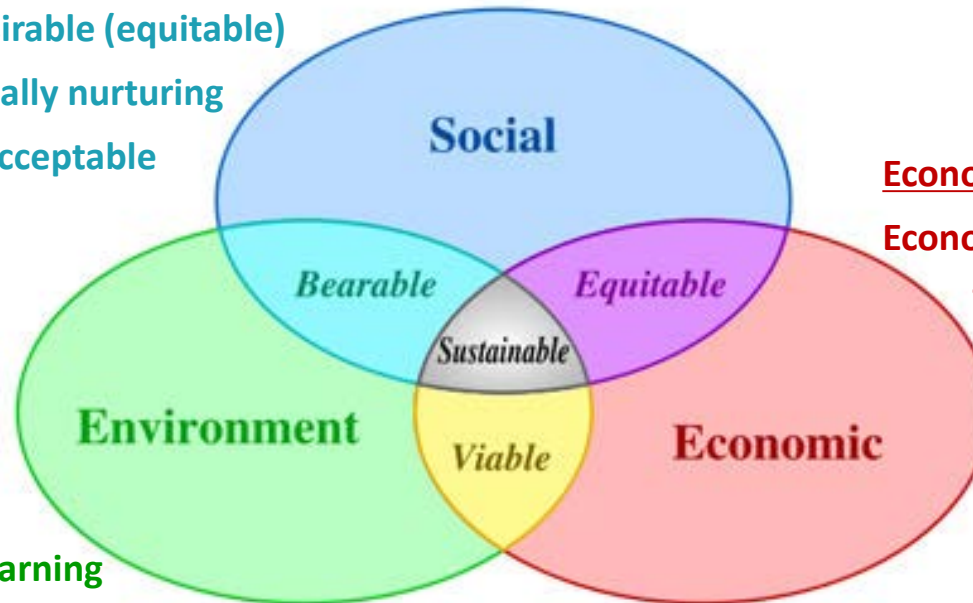
Culturally acceptable

Environmental Criteria

Environmentally robust

Generationally sensitive

Capable of continuous learning



Economic Criteria

Economically sustainable

Technologically feasible

Operationally viable

Definition Source: *Our Common Future: Report of the World Commission on Environment and Development also known as the Brundtland Report*), United Nations, 1987.

Graphic Source: Johann Dréo and translated by User:Pro_bug_catcher, March 2006/ Translated January 2007 and Accessed October 21, 2010, at http://en.wikipedia.org/wiki/File:Sustainable_development.svg#file



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SUSTAINABILITY TRIPLE BOTTOM LINE

Social/Ethical performance

Economic *performance*

+ **Environmental** *performance*

Sustainable Communities

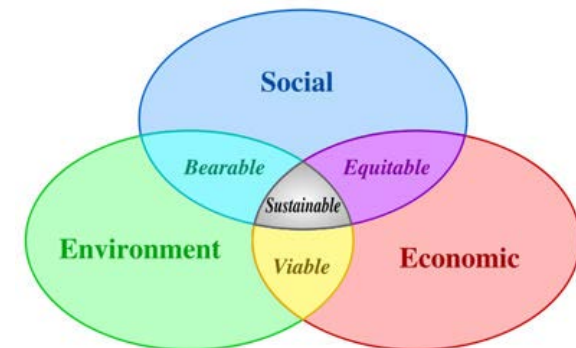


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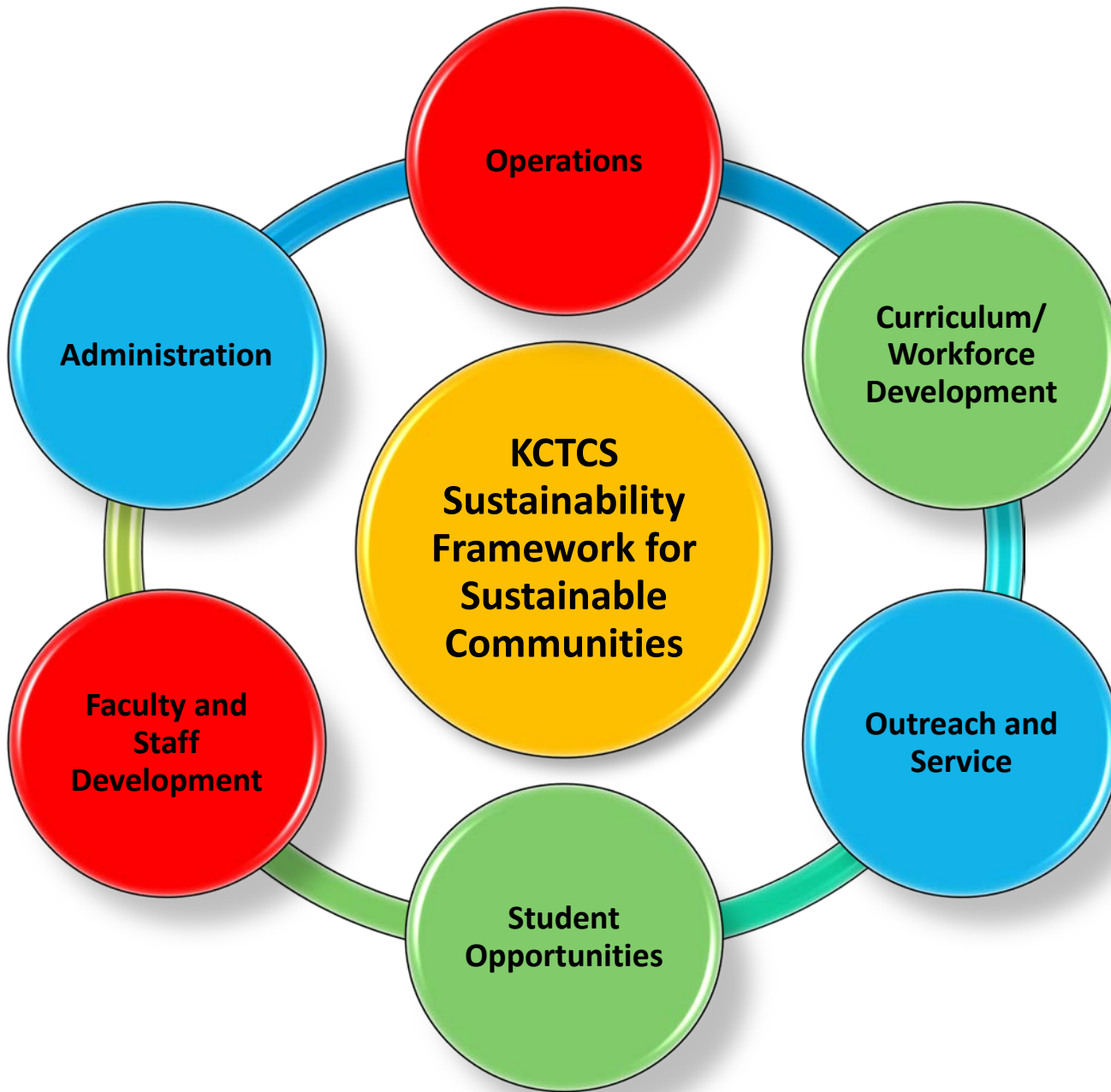
SUSTAINABILITY

Sustainability is multifaceted and Green +

- Touching every area of a college
- Demonstrating responsible stewardship of social, economic, and environmental resources
- Improving efficiencies and effectiveness in a socially equitable manner
- Facilitating cultural change to enhance the well-being of people
- Balancing the social, environmental, and economic criteria of the sustainability triple bottom line to obtain sustainable communities inside, across, and outside of KCTCS



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KCTCS SUSTAINABILITY FRAMEWORK FOCUS - NO SILOS!

- Inter-unit partnerships
- Inter-department partnerships
- Intercollege partnerships
- Community partnerships

ROAD TO GREEN+: FRAMEWORK DEVELOPMENT

February to March 2011 – Met with Sustainability Contacts to identify current sustainability initiatives and to gather input for the KCTCS initiative

April 2011 – Obtained KCTCS President’s Cabinet approval of proposed framework development process

June 2011 – Assigned during PLT meeting to the KCTCS PLT Services Transformation Team

November 2011 – Received direction to develop comprehensive framework, in collaboration with local sustainability contacts, to guide development of local sustainability plans



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ROAD TO GREEN+: FRAMEWORK DEVELOPMENT

- **Framework drafted by Sustainability Workgroup**
 - November 2011 through February 2012
- **Framework presented:**
 - March 2012 to the Services Transformation Team
 - April 2012 to the PLT as an Information Item
 - June 2012 to the PLT as an Action Item
- **Local sustainability plans developed:**
 - July 2012 through April 2013
 - Updates provided to Services Transformation Team
- **Local sustainability plans presented:**
 - June 2013 to the KCTCS Board of Regents



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ROAD TO GREEN+: FRAMEWORK DEVELOPMENT

March 2012 – Presented draft framework to Services Transformation Team as an information item

June 2012 – Received approval for the framework by the KCTCS President and PLT

June 2012 – Partnered with AACC SEED Center Peer Mentoring Initiative

July 2012 to June 2013 – Developed local sustainability plans

September to December 2012 – Met with college Sustainability Teams to discuss local plan development

December 2012 – Presented sustainability framework to the KCTCS Board of Regents

June 2013 – Presented local sustainability plans to the KCTCS Board of Regents

July 2013 to current – Implement local sustainability plans



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SUSTAINABILITY FRAMEWORK

- Affords each college and the System Office to develop plans unique to their characteristics and culture
- Promotes sustainability goals of particular importance to KCTCS and Kentucky (e.g., Kentucky Proud, energy efficiency and management, LEED building and operations, etc.)
- Maximizes flexibility while establishing systemwide metrics to communicate KCTCS sustainability achievements.
- Allows for national benchmarking using internationally recognized postsecondary sustainability metrics, facilitating recognition of KCTCS as a global sustainable development leader among peer institutions



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SUSTAINABILITY FRAMEWORK COMPONENTS

- Purpose
- Sustainability Definition
- Sustainability Vision
- Sustainability Aim
- Sustainability Objectives
- Sustainability Focus
- Sustainability Strategy
- Sustainability Local Plan Components



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KCTCS GREEN+ VISION

Consistent with the KCTCS Vision to be the nation's premier community and technical college system, be a leader in practices, educational and workforce training opportunities, and community engagement related to sustainable development or sustainability



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KCTCS GREEN+ SUSTAINABILITY AIM

Demonstrate responsible stewardship and facilitate cultural change to:

- Enhance the well-being of people and KCTCS in a socially equitable manner
- Focus on being Green Plus by balancing the social, environmental, and economic criteria of the sustainability triple bottom line
- Obtain sustainable communities inside, across, and outside of KCTCS



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KCTCS GREEN+ SUSTAINABILITY OBJECTIVES

- Facilitate cultural change to balance the social, environmental, and economic criteria of the sustainability triple bottom line across KCTCS
- Enhance the efficiency and effectiveness of KCTCS
- Protect Kentucky's natural resources and environment
- Embrace and practice social justice across KCTCS
- Benchmark progress toward sustainability using nationally recognized sustainability metrics



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KCTCS GREEN+ STRATEGY

Promote sustainable communities inside and outside of KCTCS, using an all-encompassing, no-silo approach, through adoption of sustainable development goals for each KCTCS focus area



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SUSTAINABILITY LOCAL PLAN COMPONENTS

- I. Local Sustainability Statement
- II. Sustainability Team Responsibilities and Organization
- III. AASHE STARS Goals, Strategies, and Timelines *
- IV. KCTCS Specific Focus Area Specific Goals, Strategies, and Timeline(s)*

** Where applicable, STARS and KCTCS Focus Area goals may mirror each other.*



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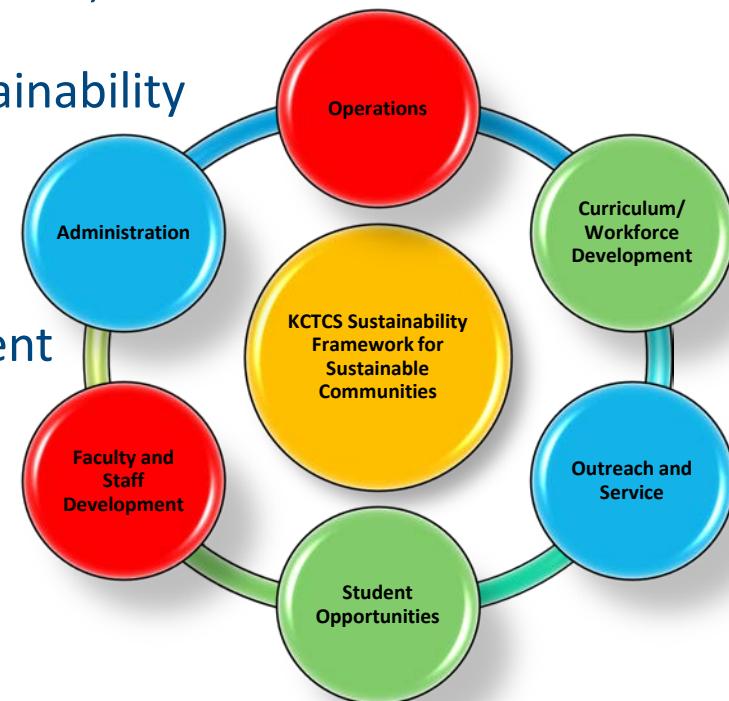
SUSTAINABILITY FRAMEWORK – KCTCS FOCUS AREAS

• Administration

- Public commitment to sustainability
- Participation in community projects
- Sponsorship of special sustainability-related events, such as Earth Day and Arbor Day
- Participation in national, regional, or local sustainability campaigns or competitions

• Outreach and Service

- Partnerships promoting sustainable development
 - Government
 - Local school districts
 - Postsecondary institutions
 - Business and industry
 - Civic organizations
 - Other



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SUSTAINABILITY FRAMEWORK – KCTCS FOCUS AREAS

- **Curriculum/Workforce Development**
 - Green career pathways
 - Sustainable workforce development
 - Academic courses and programs related to sustainability
 - Incorporation of sustainability principles into existing curricula
- **Student Opportunities**
 - Integration of sustainability into new student orientations
 - Establishment of sustainability-related student organizations
 - Internships, community outreach/service, service learning related to sustainable development
- **Faculty and Staff Development**
 - Integration of sustainability into new employee orientations.
 - Staff development related to sustainable development

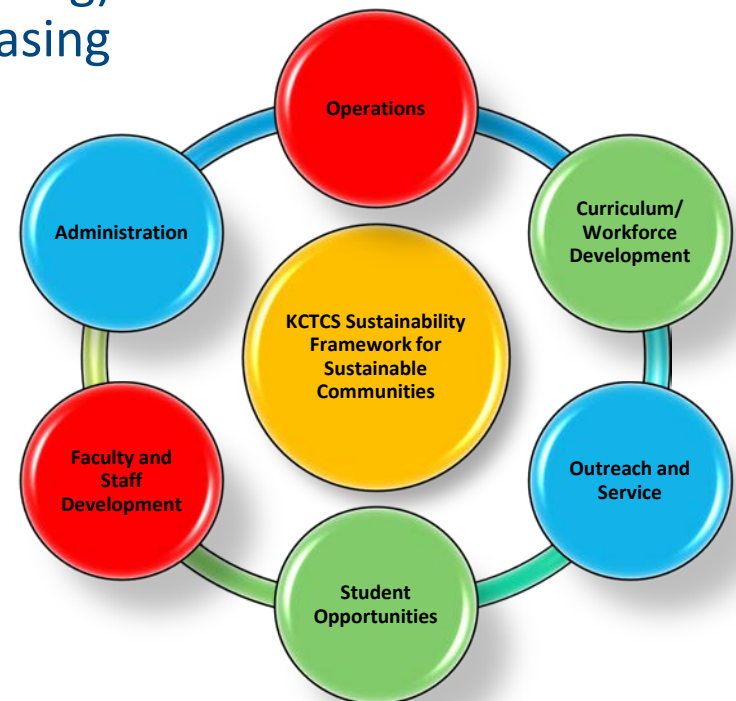


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SUSTAINABILITY FRAMEWORK – KCTCS FOCUS AREAS

• Operations

- Energy efficiency, energy management, and energy efficiency controls
- Waste reduction (reducing, reusing, recycling)
- Sustainable, green, or eco-friendly purchasing
- Ecological stewardship
 - Kentucky Proud food purchase
 - Community gardens
 - Natural landscaping
- Green building and renovations
- Green cleaning practices
- Water usage
- Transportation



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American Association of Community Colleges Community College Green Mission

By transforming their curricula, workforce development, community collaboration, and campus operations, community colleges will generate the skills, values, and behaviors that will prepare society and students to participate in a thriving green and sustainable economy



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IT'S ABOUT BALANCE!

Social

Economic

Environmental

**Operations Curriculum/
Workforce
Development Outreach
and Service Student
Opportunities Faculty
and Staff
Development Administration**

**Sustainable
Communities**

KCTCS GREEN+ SUSTAINABILITY FRAMEWORK DEVELOPMENT SUMMARY

**2011-12 Sustainability Workgroup of College
Sustainability Contacts Developed Framework**

**2012 System Office President / President's Leadership
Team Approves Framework**

**2012-13 Colleges Develop
Local Sustainability Plans**

**2013 Local Sustainability Plans Presented
to KCTCS Board of Regents**

**2013-14 Local Sustainability Plans Implemented by
Sustainability Committee or Green Team**



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KCTCS GREEN+ INITIATIVES

Ashland Community and Technical College

- Grayson Lake Cleanup
- City of Ashland Recycling

Big Sandy Community and Technical College

- Mayo Campus Park Construction
- Community Garden Partnership with Growing Warriors and other community groups

Bluegrass Community and Technical College

- Newtown Campus Classroom Building
- International student outreach
- Latino Leadership and Experience Camp

Elizabethtown Community and Technical College

- Commonwealth Energy Management Control System (CEMCS)
- Business and Industry Professional Development, “3 Rs of Sustainability”



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KCTCS GREEN+ INITIATIVES

Elizabethtown Community and Technical College

- Commonwealth Energy Management Control System (CEMCS)
- Workforce Development offers a Professional Development course, “3 Rs of Sustainability” for business and industry

Gateway Community and Technical College

- Living Lab Opportunities
- Bicycle Friendly designation

Hazard Community and Technical College

- Office of community Engagement and Volunteer Services and Student Group
- Computer Savings Software

Henderson Community College

- Art of Recycling Exhibit at the Henderson Fine Arts Center
- 30 in 13 Campaign to reduce paper usage and environmental impact



Mayo Campus Park Dedication and Ribbon Cutting Ceremony, October 1, 2013, Paintsville, Kentucky



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KCTCS GREEN+ INITIATIVES

Hopkinsville Community College

- STARS Bronze Rating – First KCTCS College to receive STARS rating
- Installation of a 25 KW solar array and complementing dashboard

Jefferson Community and Technical College

- Environmental Youth Summit
- Partnership for Green City

Madisonville Community College

- Energy Management Program and MOA with Everblue
- Installation of wind turbines and solar array

Maysville Community College

- Disc golf course
- Fish stocking collaboration with Kentucky Department of Fish and Wildlife Resources and local school district



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KCTCS GREEN+ INITIATIVES

Owensboro Community and Technical College

- National Science Foundation Grant to offer scholarships in STEM areas, including Biotechnology and Mechatronics
- Sponsored reading to explore India's culture, social justice, and other sustainability issues

Somerset Community College

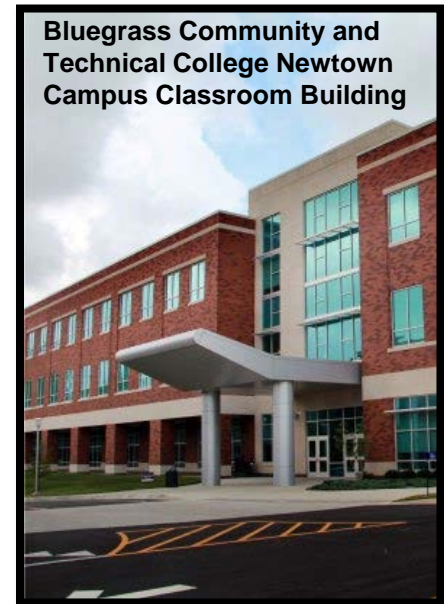
- Annual Earth Day
- Wind turbine research

Southcentral Community and Technical College

- Geothermal heating and cooling
- Recycling initiative

Southeast Kentucky Community and Technical College

- Faculty and staff email competitions
- Experiential education related to water runoff at local industrial park



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KCTCS GREEN+ INITIATIVES

West Kentucky Community and Technical College

- Going Green Grant to build a Green Energy Auditing Simulator for Emerging Technology
- Construction of new Sculpture Building for Paducah School of Art and Design

KCTCS Initiatives

- Better Buildings Challenge, U.S. Department of Energy
<http://www4.eere.energy.gov/challenge/partners>
- Commonwealth Energy Management Control System
<http://kyenergydashboard.ky.gov/#/Buildings>
- KCTCS Center for Environmental and Sustainability Education and Workforce Training
- Kentucky University Partnership for Environmental Education
<http://www.kupee.eku.edu/INDEX.HTM>
- KCTCS Green+ Website
http://www.kctcs.edu/en/About_KCTCS/System_Administration/Sustainability.aspx



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KCTCS GREEN+ INITIATIVE

Resources

KCTCS Green+ Initiative Website

http://www.kctcs.edu/About_KCTCS/System_Administration/Sustainability.aspx

American Association of Community Colleges (AACCC) Seed Center

<http://www.theseedcenter.org/default.aspx>

Association for the Advancement of Sustainability in Higher Education (AASHE)

<http://www.aashe.org/>

Better Buildings Challenge, U.S. Department of Energy

<http://www4.eere.energy.gov/challenge/partners>

Commonwealth Energy Management Control System (CEMCS)

<http://kyenergydashboard.ky.gov/#/Buildings>



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KCTCS
GREEN 
INITIATIVE



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

1997-2010

- Authorization received for 45 new state funded capital construction projects or major renovation projects, totaling approximately \$500 million
 - 33 projects completed between 1998 and 2008, having approximate total scope of \$276 million
 - 11 projects completed during the 2008-10 biennium, having approximate total scope of \$200 million
 - 1 project completed in the 2012-14 biennium

2004

- Became the second Kentucky postsecondary institution to enter into an Energy Savings Performance Contract (Jefferson and Elizabethtown)
- Incorporated Leadership in Energy and Environmental Design (LEED) standards into building and design



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2008-09

- KCTCS Chancellor appointed to the American Association of Community Colleges Sustainability Task Force that developed a sustainability strategic plan and Green Mission for its member colleges

2010

- Participated, KCTCS Chancellor, on the American Association of Community College Sustainability Task Force
- Became partner in Commonwealth Energy Management and Control System (CEMCS) pilot project with the Finance and Administration Cabinet
(<http://kyenergydashboard.ky.gov/#/Home>)
- Hired a Director of Capital Construction and Sustainability Initiatives (August)
- Hired a Sustainability Project Manager (November)
- Appointed Sustainability Contacts at each KCTCS College (December)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2011

- Met with Sustainability Contacts to identify current sustainability initiatives and to gather input for the KCTCS initiative (February to March)
- Obtained KCTCS President's Cabinet approval of proposed framework development process (April)
- Developed the [KCTCS Green+\[read "plus"\]](http://www.kctcs.edu/About_KCTCS/System_Administration/Sustainability.aspx) website
(http://www.kctcs.edu/About_KCTCS/System_Administration/Sustainability.aspx)
- Assigned, President's Leadership Team (PLT), initiative to the KCTCS PLT Services Transformation Team (June)
- Began work on draft comprehensive sustainability framework for college and System Office use in developing local sustainability plans (July)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2011, continued

- Appointed System Office Sustainability Team (July)
- Rolled-out initiative at the System Office, including expansion of recycling and elimination of disposable cups in employee break rooms (July)
- Presented proposed framework development strategy to the PLT Services Transformation Team (November)
- Invited to be a White House/Department of Energy inaugural partner in President Obama's *Better Buildings Challenge* (<http://www4.eere.energy.gov/challenge/>), committing to reduce energy consumption across KCTCS 20 percent by 2020 (December)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2012

- Incorporated Leadership in Energy and Environmental Design (LEED) standards into building and design of the Newtown Campus of Bluegrass Community and Technical College (Ongoing)
- Entered into a fifth ESPC, resulting in all 16 KCTCS participating in energy savings performance contracts with anticipated total savings for all five contracts exceeds \$28 million and 22.9 million KWH, .28 million KGALS, and 1.6 million THERMS) (January)
- Met with the Kentucky Environmental Education Council to discuss partnership opportunities to promote environmental education across the Commonwealth (January)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2012, continued

- Piloted Campus Conservation National competition with Madisonville Community College, becoming the first community and technical college to participate in the national energy and water efficiency competition (February)
- Piloted Green Genome Sustainability Self-Assessment for the AACC SEED Center (April to June)
- Became first state to have all community colleges join the American Association of Community Colleges (AACC) Sustainability Education and Economic Development (SEED) Center (May)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2012, continued

- Obtained PLT approval of the Comprehensive Sustainability Framework to guide implementation of sustainability across KCTCS (June/July)
- Partnered with the AACCC SEED Center Mentor Connect Program to inform implementation of sustainability into KCTCS curriculum and programs (June 2012 to February 2013)
- Met with KCTCS Colleges' Sustainability Teams to discuss local sustainability plan development (September through December)
- Partnered with the Kentucky Chapter of the USGBC
 - Green Apple Day of Service (September)
 - LEED EB Project with Wilmore Elementary School, Wilmore, Kentucky (September to current)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2012, continued

- Invited to join the Kentucky University Partnership for Environmental Education (KUPEE) (September)
- Presented Sustainability Framework to the KCTCS Board of Regents (December)
- Offered Hybrid Technology Workshop
 - Collaboration with the AACCC SEED Mentor Connect Program and with Automotive Research and Design, LLC.
 - Attended by 11 of 16 KCTCS Colleges, resulting in more than half of KCTCS automotive faculty being certified in Hybrid Technology (December)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2013

- Co-Sponsored Sustainability Workshop focused on integrating sustainability in the curriculum (February)
 - Collaboration with AACC SEED Center and two community colleges in North Carolina (Wake Technical College and Davidson)
 - Attended by more than 30 participants, representing 15 of 16 KCTCS Colleges
- Expanded participation in the Commonwealth Energy Management Control System (<http://kyenergydashboard.ky.gov/#/Home>), adding Ashland Community and Technical College (Spring 2013) Added by General Assembly to KRS 157.915, given mandate to provide environmental education statewide (May)



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KCTCS GREEN+ INITIATIVE SIGNIFICANT EVENTS

2013

- Presented KCTCS College and System Office local sustainability plans to the KCTCS Board of Regents (June)
- Collaborated with the Kentucky Association for Environmental Education to host a statewide sustainability Symposium at Gateway Community and Technical College, Covington, Kentucky (June)
- Began implementation of local sustainability plans (July to current)
- Partnered with the Kentucky Environmental Education Council and the Kentucky University Partnership for Environmental Education (KUPEE) to establish a KCTCS Center for Environmental and Sustainability Education and Workforce Solutions (Fall 2013)
- Expanded CEMCS to an additional four KCTCS Colleges, bringing total KCTCS participation to six colleges (Fall 2013)



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