



**Attachment C**

**Background  
Information/Reports**

**Sustainability  
City of Columbia  
Pre-Council  
Monday, November 17, 2008**

What is it?

What would a Sustainability  
Director/Coordinator Be  
Tasked With?



# Sustainability

- **What does it have to do with the Vision Plan?**  
“Columbia residents and businesses conserve all the community’s natural resources, work cooperatively to apply best planning practices, model energy efficiency, transition to renewable energy, and approach to zero waste generation” *(Imagine Columbia’s Future, Environment Statement, page 72).*

# Sustainability

## Best Practices and/or Strategies:

Energy Conservation

Water Conservation

Waste Reduction or Waste to Energy

Building Standards and Codes LEEDS Certified

Green Jobs and Technologies

Alternate Transportation Modes

To name a few...

# Sustainability

**“Sustainable Development”**  
is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (*World Commission on Environment and Development, 1987*).

**“Sustainability...means changing our society and our organizations so that we live within the limits of nature. But it’s more than just “green”...the triple bottom line: making decisions that support a healthy economy, community and environmental-all three.”**  
(*International Society of Sustainability Professionals, 2008*).



## MILWAUKEE OFFICE OF ENVIRONMENTAL SUSTAINABILITY

**It's about our economy.**

**It's about our environment.**

**it's about a New Milwaukee.**

**Milwaukee will be a livable city...**

- where our rivers and lakes are clean;
- where our beaches are crowded with families enjoying the sand and water;
- where our political leaders do not hesitate to innovate;
- where our air is clear and our children can safely play outside on summer days;
- where shopping and entertainment are within walking distance of our homes;
- where employers in the hottest green technologies come to do business; where our workforce is qualified and ready to work for these businesses;
- where our city is known to young professionals around the country as a progressive place to live;
- where we consider the future when we make decisions today;
- where the story when it rains is how green and our streetscapes are, not that our sewerage plants have overflowed;
- where citizens, businesses, and governments come together to find practical solutions our shared challenges;
- and where we do the hard work to make this vision a reality.





## Green Team Government and Community Partners

- 1000 Friends of Wisconsin
- Apollo Alliance
- Bicycle Federation of Wisconsin
- Center for Sustainability Education
- Clean Wisconsin
- Community Shares of Greater Milwaukee
- Community Warehouse
- Energy Center of Wisconsin
- Focus on Energy
- Friends of Milwaukee's Rivers
- Great Lakes WATER Institute
- Greater Milwaukee Committee
- Growing Power
- Keep Greater Milwaukee Beautiful
- Leonardo Academy
- Menomonee Valley Partners
- Midwest Renewable Energy Association
- Milwaukee Area Technical College (MATC)
- Milwaukee Department of City Development
- Milwaukee Department of Public Works
- Milwaukee Environmental Consortium
- Milwaukee Health Department
- Milwaukee Metropolitan Sewerage District
- Milwaukee Water Works
- Outpost Natural Foods
- River Revitalization Foundation
- Schlitz Audubon Nature Center
- Sierra Club
- Urban Ecology Center
- Urban Open Space Foundation
- US Environmental Protection Agency
- UW-Milwaukee School of Architecture & Urban Planning
- Visit Milwaukee
- WasteCap Wisconsin
- Wisconsin Be SMART Coalition
- Wisconsin Clean Cities
- Wisconsin Department of Natural Resources
- Wisconsin Environmental Initiative
- Wisconsin Green Building Alliance
- Wisconsin Ground Water Association
- Wisconsin Interfaith Climate & Energy Campaign
- Wisconsin Partners for Clean Air
- Wisconsin Partners for Sustainability

# Austin, Texas



## Mission:

The City of Austin's **Sustainable Communities Initiative (SCI)** exists to help the greater Austin region achieve **economic prosperity, social justice, and ecological health** - the highest possible quality of life in the best possible environment. SCI programs and policies will respond effectively to the real limits of ecological systems while fostering the unprecedented opportunities of a democratic society in which all people are able to develop to their fullest potential.

## What is a Sustainable Community?

**A sustainable community** is one whose prospects for long-term health are good. Its residents do not deplete the resources that they depend on faster than those resources are replenished. Specific characteristics include:

- respect for basic rights and recognition of basic responsibilities
- living within ecological carrying capacity
- equal opportunities for individual development
- a diverse economic base
- a vibrant democracy - with an informed, involved citizenry
- protection of natural diversity
- improving the minimum standard of living
- maximizing the use of people's abilities while minimizing the use of natural resources.

# Sustainability

**If a Sustainability Position is added, what do we want to happen as a result?**

- Realize more efficiencies and reductions; energy conservation, waste reduction, and pollution prevention?
- Realize cost savings; position should pay for itself? How do we monitor?
- Meet or exceed actions in the City's Climate Protection Resolution?

# County of Marin, California

## Energy Conservation Practices

**General Service Building.** A 75 kW photovoltaic (PV) system was installed on the County General Services Building in 2004. This PV array is saving \$24,000 annually in energy costs.



## Water Conservation Practices

**Bathroom Renovation.** Motion sensor faucets and waterless urinals are being installed for water conservation. It is estimated a standard urinal uses 48,000 gallons of water per year. The County is in the process of installing 63 waterless urinals



The waterless urinals alone will save a total of 3,024,000 gallons of fresh water per year.

This amount is the equivalent of a three year supply of drinking water for 4,320 persons.



## Pollution Prevention Practices

Stipend Program County has developed a pilot stipend incentive program to encourage employees to come to work without using other than single occupant motor vehicles. This program is underway and will be closely monitored for its effectiveness.

To date, these measures have resulted in a significant decrease in the fuel costs and an estimated 400 ton reduction of CO2 emissions associated with employee commuting.

# County of Marin, California

## Partnership With Private Businesses

Our goal was to have 250 certified Green  
Businesses by 2010

As of December 4, 2007 we have certified  
**245**  
Green Businesses

# Sustainability

## Sustainability Proposal 1:

### Water & Light Utility:

*Tasked with:*

- Energy Reduction Practices and Programs
- Energy Reduction Actions-those related actions in the ***City's Climate Protection Resolution***
- Water Conservation Practices and Programs

### Sustainability Director/Coordinator:

*Tasked with:*

- Oversight of Green Jobs and Technology Initiatives, Waste Reduction and Pollution Prevention cost savings efforts and reductions
- Coordinating implementation of ***City's Climate Protection Resolution*** Actions (other than Energy Reduction Actions)
- Organizing/staffing citywide **Sustainable Work Group**; public, business, and non-profit
- Coordinating Intergovernmental Sustainable Work Group
- Identifying and implementing sustainable actions that have cost savings and reductions
- Tracking, gathering, and coordinating collection of data and conducting cost savings analyses
- Coordinating integration of sustainability practices into city boards and committees
- Coordinate city programs, efforts, and initiatives across all city departments that fall under theme of ***Building a Sustainable Columbia***.

# Sustainability

## Sustainability Proposal 2:

### Water & Light Utility:

#### *Tasked with:*

- Energy Reduction Practices and Programs
- Energy Reduction Actions-those related actions in the ***City's Climate Protection Resolution***
- Water Conservation Reduction Practices and Programs

### Consultant:

#### *Tasked with:*

- Preparing ***A Sustainable Action Plan*** for the City
- Conducting an audit of City Government Facilities and Operations for cost savings efforts
- Conducting cost benefit/analyses to demonstrate cost savings and reductions
- Assisting with implementation of short/long term cost savings Sustainable Best Practices
- Assisting with implementation of related actions in City's Climate Protection Resolution
- Recommending collection of pertinent data and cost/benefit software
- Coordinating integration of sustainability practices into related city boards and committees
- Making recommendations regarding full time sustainable coordinator position or further integrate Sustainable Best Practices into existing city operations
- Coordinate city programs, efforts, and initiatives across all city departments that fall under theme of ***Building a Sustainable Columbia***.

# Sustainability

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## Suggestions:

- **Implement Option 2.**
- Coordinate city programs, efforts, and initiatives under the broad theme of ***Building a Sustainable Columbia.***
- Establish a citywide ***Sustainable Work Group;*** public, business, and non-profit. How do we staff it?
- Are there resources for a new position or development of a Sustainability Plan/Consultant?
- How do we proceed?

TO: Bill Watkins  
 City Manager  
 FROM: Paula Hertwig Hopkins   
 Assistant City Manager  
**SUBJECT: Creation of Sustainability Director, Administrator or Coordinator Position**  
 DATE: 19 September 2008

**Issue:** Examined three (3) cities; Milwaukee, Wisconsin, Fayetteville, Arkansas, and Austin, Texas, their sustainability efforts and program staffing with a Sustainability Director, Coordinator or Administrator. Columbia's FY09 budget created a Sustainability Director position with some funding. Where does this position belong, what are the expectations, and is it a stand alone position or located within an existing department?

**Discussion:** A working definition of *sustainability* varies by communities that have adopted sustainable priorities or policy resolutions; economic development and financial health (**Austin, Texas**), reduction of CO<sub>2</sub> emissions through a city wide climate protection plan (**Madison, Wisconsin and Chapel Hill, North Carolina**), reduction of wasteful and inefficient practices in utilities (**Fayetteville, Arkansas**), solid waste reduction and Zero Waste plans (**Austin, Texas**) or the combination of all of the above (**Milwaukee, Wisconsin and Austin, Texas**). Below are listed a short synopsis of three (3) cities each of which have a different sustainability "bent" or focus, the job position charged with overseeing their sustainability efforts, and pay range. Job descriptions are attached. Milwaukee, Wisconsin Human Resources could not find their job description.

Municipality	Sustainability Efforts	Job Position	Description	Stand Alone or Interdepartmental Position	Pay Range
A) Milwaukee, Wisconsin	Mayor initiated program of citywide magnitude; Office of Environmental Sustainability	Environmental Sustainability Director	Steers citywide environmental policy; develops "green" goals, marketing, and "green" economic development	Cabinet Type Position appointed by and reports to Mayor	\$70,767- \$99,074
B) Fayetteville, Arkansas	Mayor initiated sustainability efforts out of desire for both financial sustainability and reduction of wasteful spending and inefficiencies, particularly utilities	Sustainability Coordinator	Leads and implements sustainability program. Team leader that works interdepartmentally to achieve goals	Stand Alone Position appointed by and reports to Mayor	\$52,841- \$80,530
C) Austin, Texas	Part of Council's overall Sustainable Community Policy Priority	Sustainability Administrator	Directs and manages the City of Austin's long range solid waste management plan and Zero Waste Plan	Solid Waste Mangement Department-four levels below Assistant City Manager	\$58,427- \$98,176

#### **A) Milwaukee, Wisconsin**

In 2006, the city adopted a broad policy which includes a Green Vision Statement and broad economic and environment sustainability goals. In order to keep an aggressive "green" agenda on the forefront of their city's priorities, they created the Office of Environmental Sustainability and appointed a Sustainability Director, a cabinet level position that reports to the Mayor. The Sustainable Director has broad responsibilities for creating and implementing a Green City Plan for city operations as well as private sector initiatives. No discussion about whether or not the position should pay for itself.

#### **B) Fayetteville, Arkansas**

The city initiated their sustainable effort as a means of reducing energy consumption and environmental impact. Some of this is driven by decreasing revenues so the effort underway is to use less of everything in all city operations emphasis on electricity, gasoline, and office supplies. They created a Sustainability Director position whose main job is to put together a sustainable team that will seek out wasteful and inefficient practices/operations. The position was created under the condition that sufficient savings are generated to pay for the position. Their Mayor just recently announced the First Annual Fayetteville Sustainability Summit scheduled for October 10, 2008.

#### **C) Austin, Texas**

The City of Austin's vision is becoming the most livable city in the country. Their City Council adopted four (4) priorities one of which is Sustainable Economic Development and Financial Health. The budgeting initiatives that fall under this priority include the following: Support for Cutting Edge Businesses, Focus on Small and Minority-Owned Business Development, Citywide Climate Protection Plan, and Focus on Affordable Housing. Austin does have a Sustainability Administrator position but the focus is solid waste and their Zero Waste Plan. The position is not a stand alone, four levels below an Assistant City Manager.

After giving some thought to what the position might do, where it could be located, Council's expectations, and many of the goals and strategies in the Vision Plan, it became apparent that there are many citywide efforts underway and others that will develop as a result of the Vision Plan which fall under "sustainability," but just aren't labeled "sustainable." For example, our Non-Motorized Pilot, all the Energy Star Home programs, incentives/rebates for renewable projects, landfill gas to energy projects, endorsement of the U.S. Mayors Climate Protection Agreement, and our membership in ICLEI-Local Governments for Sustainability USA are "sustainable."

That being said, some thought might be given to identifying and repackaging city programs, efforts, and initiatives across all city departments that fall within the definition of **sustainable or sustainability** under a broad theme of **Building A Sustainable Columbia**. It does not conflict with the Vision Plan and in fact, supports some of the goals and many of the strategies.

I have not yet been able to reach anyone at the University regarding their sustainable efforts but will continue to make contact with them.

#### **Suggested Action Regarding Job Position and Expectations:**

- Stand Alone Position-Reports to CMO
- Position will generate measurable savings or will pay for itself
- Identify Sustainable Performance Benchmarks and meet Target Goals
- Manage and Direct citywide sustainability plan
- Explore as Contract Position that "goes away" if it does not pay for itself.

Please advise if additional information is needed at this time. Thank you.

## Department of Employee Relations

**JOB EVALUATION REPORT**City Service Commission Meeting: January 10, 2006

This report recommends appropriate classifications and compensation levels for eight positions created or changed in conjunction with the implementation of the 2006 City of Milwaukee Budget. This report contains recommendations for positions in Common Council—City Clerk, Department of Neighborhood Services, Mayors Office, and Department of Administration.

In reviewing these positions, staff analyzed new job descriptions and held discussions with management representatives from affected departments. The following chart summarizes the recommended changes.

**COMMON COUNCIL—CITY CLERK**

Current	Request	Recommendation
License Specialist PR 455 (\$36,362-\$40,539)	Customer Service Representative II PR 435 (\$33,316-\$36,708)	Customer Service Representative II PR 435 (\$33,316-\$36,708)
Lead Staff Assistant SG 007 (\$51,440-\$72,013)	Staff Assistant SG 006 (\$48,257-\$67,566)	Staff Assistant SG 006 (\$48,257-\$67,566)

**DEPARTMENT OF NEIGHBORHOOD SERVICES**

Current	Request	Recommendation
2 New Positions	Plumbing Inspector II PR 788 (\$56,223-\$63,279)*	Plumbing Inspector II PR 788 (\$56,223-\$63,279)*
New Position	Office Assistant II PR 410 (\$28,057 - \$33,014)	Office Assistant II PR 410 (\$28,057 - \$33,014)
New Position	Office Assistant III PR 425 (\$31,905 - \$35,296)	Office Assistant III PR 425 (\$31,905 - \$35,296)

\*Educational requirements must be met before an employee is paid at steps 4 (\$61,436) and 5 (\$63,279) of Pay Range 788. Consideration is also given for acquiring and maintaining specific certifications.

**MAYOR'S OFFICE**

Current	Request	Recommendation
New Position	Office of Environmental Sustainability- Director SG 012 (\$70,767-\$99,074)	Environmental Sustainability Director SG 012 (\$70,767-\$99,074)

**DEPARTMENT OF ADMINISTRATION**

Current	Request	Recommendation
New Position	Grant Coordinator SG 009 (\$58,448-\$81,824)	Grant Compliance Manager SG 009 (\$58,448-\$81,824)

Eight new or changed positions in the 2006 budget  
 In City Clerk, DNS, Mayor and Administration . . . #6

January 10, 2006

- 10% Ensure all files and records for the Property Recording Section are properly maintained.
- 10% Respond to or direct all telephone inquiries and public contacts.
- 10% Assist other support staff, when needed, with data entry to ensure the timely processing of information.
- 10% Fill in for other support staff and perform other duties related to the Property Recording Program and the Administration Section as needed.
- 5% Maintain records of incomplete applications and follow up as needed.

The requirements for this position include four years of office experience and computer training with a general knowledge of word processing and database and spreadsheet software.

The specification for Office Assistant III includes the ability to perform diverse and complex duties involving the application of standard procedures to a variety of assignments; select and interpret data, and demonstrate a thorough knowledge of departmental and organizational policies and procedures in assigned area of responsibility; screen telephone calls, answer questions, and provide information; use advanced features of software packages on a regular basis to produce complex documents; work with others on a team to complete special projects; and guide and check the work of others.

The distinguishing characteristics of an Office Assistant III position from an Office Assistant II position is that they perform more difficult or complex work that requires a thorough knowledge of the area of responsibility and/or have leadworker responsibilities for one or more other positions. This new position will be responsible to oversee the work of three other positions, one full time and two part time, and will have overall responsibility for the support staff work in the Property Recording Section.

The requested level of Office Assistant III is appropriate and we recommend that this new position be classified as Office Assistant III in Pay Range 425.



**MAYOR'S OFFICE**

<b>Current:</b>	<b>New Position</b>	
<b>Request:</b>	<b>Office of Environmental Sustainability-Director</b>	<b>SG 012</b>
<b>Recommended:</b>	<b>Environmental Sustainability Director</b>	<b>SG 012</b>

In October of 2005, a Mayoral committee charged with mapping Milwaukee's environmental future recommended that the City create an Office of Sustainability staffed by a new position/employee appointed by the Mayor with the stature of a cabinet member (*The Milwaukee Green Team's Report to Mayor Tom Barrett, October 2005*). Some of the goals cited in this report for the Office of Sustainability were to:

- Steer Citywide environmental policy
- Document baseline environmental performance
- Promulgate Citywide environmental goals
- Develop and monitor departmental goals
- Develop green marketing and public education programs
- Promote green economic development
- Secure funding sources for green initiatives

Eight new or changed positions in the 2006 budget  
 In City Clerk, DNS, Mayor and Administration . . . #7

January 10, 2006

The City's 2006 budget included a new position to head a new Office of Environmental Sustainability that will be funded by revenues from the Milwaukee Water Works.

Our review of this position included discussions with Rhonda Kelsey, Staff Assistant to the Mayor; and Proston Cole, Environmental Services Superintendent. It should be noted that Mr. Cole served on the Steering Committee of the Milwaukee Green Team.

Important considerations regarding the appropriate job title and compensation for this position are:

- The establishment of a new office and the development and implementation of new policies and procedures
- The position's stature as a member of the Mayor's cabinet
- The position's responsibility to work with policymakers in City government to ensure the achievement of cost savings and sustainable environmental outcomes
- Extensive contacts with private business leaders; citizen groups; elected officials at the local, state and federal level; and extensive coordination within City government
- Qualifications—five years of experience in a leadership position working with federal, state, and local governments; working knowledge of environmental issues and best practices.

Considering the aforementioned, the request to establish the position as an Environmental Sustainability Director in SG 12 appears appropriate. The factor levels and points associated with this position are as follows:

	Level	Points
Impact and accountability	12	209
Knowledge and skill	10	154
Relationship Responsibility	12	116
Working Conditions	1	5
<b>Total</b>		<b>484</b>
SG 012 (466-534)		

**DEPARTMENT OF ADMINISTRATION**

<b>Current:</b>	<b>New Position</b>	
<b>Request:</b>	<b>Grant Coordinator</b>	<b>SG 009</b>
<b>Recommended:</b>	<b>Grant Compliance Manager</b>	<b>SG 009</b>

This new position will report to the City's Block Grant Director. Its primary purpose will be to coordinate the submission of grants on a citywide basis, thus enhancing the City's funding sources. Specific duties include:

- Identifying grant opportunities
- Applying for grants
- Ensuring compliance with City processes and requirements for grant applications and acceptance
- Assisting other City Departments in applying for grants and evaluating options for improving and streamlining current grant processes and procedures
- Providing technical assistance to City Departments
- Training City staff in applying for grants.

Qualifications for the position include a bachelor's degree in Public Administration, Finance or other related field and five years of experience in grant writing, monitoring, and compliance.



## City of Austin - JOB DESCRIPTION



### Sustainability Administrator

<b>FLSA:</b>	Standard/Exempt	<b>EEO Category:</b>	(20) Professionals
<b>Class Code:</b>	18486	<b>Salary Grade:</b>	RE3
<b>Approved:</b>	October 17, 2007	<b>Last Revised:</b>	February 21, 2008

#### Purpose:

Under minimal direction, manage the implementation of the City of Austin's long range solid waste management plan including the Zero Waste Plan. Foster community-wide initiatives that can advance the principles and financial and environmental benefits from implementing sustainable best practices. Promote the City of Austin as a leader and model for other communities in the application of sustainable practices.

#### Duties, Functions and Responsibilities:

Essential duties and functions, pursuant to the Americans with Disabilities Act, may include the following. Other related duties may be assigned.

1. Responsible for oversight and implementation of the City of Austin's long range solid waste management plan and Zero Waste Plan
2. Serve as primary liaison for the City of Austin's long range solid waste management plan and Zero Waste Plan before various formal, informal and advisory groups including officials of communities. Represent Solid Waste Services' interests and positions before national and local governmental officials, boards, commissions, and community organizations.
3. Provide technical assistance to Division Manager, Department Director, City Manager and the Austin City Council.
4. Develop a platform for communicating the City's sustainability efforts to the larger community and publish annual reports on the status of such plan(s) and related projects.  
Coordinate related efforts to reach stated goals within the Solid Waste Services Department and other City Departments. Coordinate promotional and outreach efforts for Zero Waste activities.
5. Participate in workshops, public hearings, stakeholder processes, and team meetings as the City of Austin's Zero Waste Plan representative.
6. Provide leadership, insight, and concepts into zero waste and sustainable public and community relations activities.
7. Develop performance measures for implementation of the City of Austin's Zero Waste Plan.  
Research and draft documents for presentation and publication such as status reports and annual reports. Develop and manage contracts related to the City of Austin's Zero Waste Plan.
8. Promote Solid Waste Services' mission, policy, and initiatives before national and local agencies and organizations. Stay abreast of local, regional, and national zero waste and sustainable movements and issues.

#### Responsibilities - Supervisor and/or Leadership Exercised:

None.

#### Knowledge, Skills, and Abilities:

Must possess required knowledge, skills, abilities and experience and be able to explain and demonstrate, with or without reasonable accommodations, that the essential functions of the job can be performed.

Knowledge of reporting concepts and preferred business practices, of budgeting and purchasing processes and systems.

Knowledge of project management and internal control concepts and practices.

Knowledge of environmental planning, statistical analysis, communications business and economics or public administration.

Knowledge of Waste Reduction, Waste Minimization and Integrated Waste Management initiatives.

Knowledge of governmental processes and relationships, Federal, State, and local laws, ordinances, and policies.

Skill in analyzing relevant data and developing sound theses.

Skill in negotiating acceptable conclusions in competitive environments.

Skill in coordinating complex projects in a changing industry.

Skill in effective oral and written communications.

Ability to establish and maintain effective working relationships with individuals and groups of varied interests and backgrounds.

#### Minimum Qualifications:

- Graduation from an accredited four-year college or university with major course work in a field related to environmental science, public policy and administration, planning, business administration, or a related field plus four (4) years experience working in local governments or in an organization that developed partnerships and collaboration between public and private entities.

**Licenses and Certifications Required:**

None.

This description is intended to indicate the kinds of tasks and levels of work difficulty required of the position given this title and shall not be construed as declaring what the specific duties and responsibilities of any particular position shall be. It is not intended to limit or in any way modify the right of management to assign, direct and control the work of employees under supervision. The listing of duties and responsibilities shall not be held to exclude other duties not mentioned that are of similar kind or level of difficulty.

## **Sustainability Administrator**

The Sustainability Administrator is responsible for shepherding the Zero Waste Plan through the Council and Commission approval process, shoring up widespread community support and participation, and coordinating implementation within and between City Departments.

Present the Draft Zero Waste Plan to the:

- City of Austin Solid Waste Advisory Commission (for comment and action)
- Austin City Council (for comment and action)

Present the final approved Zero Waste Plan to the:

- Travis County Commissioners Court
- CAPCOG
- TCEQ

Collaborate with City Departments to implement Zero Waste Plan in City Facilities

- Develop a survey of COA Departments to evaluate the waste management systems currently in place
- Develop standardized performance measures and tracking mechanisms to evaluate the success of each department and facility
- Develop methods to communicate success to employees
- Develop employee recognition to acknowledge employee success
- Partner with the Climate Action Team to identify and act on green initiatives.

Collaborate with the community to educate, promote, and advocate Zero Waste

- Partner with area organizations such as AISD, Travis County, CAPCOG, etc to help educate the community about the City's Zero Waste initiatives.
- Help develop public-private or private-private partnerships to reduce waste and increase recycling and composting efforts

Evaluate, develop, and recommend rules/ordinance revisions that will further the City's Zero Waste initiatives

- Evaluate implementing a "green events ordinance" to encourage/require recycling, reduce carbon emissions, etc. Includes creating a green events tool kit to aid event planners in their efforts.
- Evaluate other existing ordinances to determine if revisions are required to encourage recycling and other diversion methods
- Evaluate current construction permitting processes to identify where incentives to adopt green practices can be incorporated. Close coordination with permitting department will be critical.
- Evaluate purchasing standards to determine where City Purchasing rules can be modified to adopt greener purchasing standards and ensure that appropriate controls are in place to ensure that employees follow those purchasing standards
- Work with Government Relations Division and the Texas Product Stewardship Council to develop and support and strengthen state/national Extended Producer Responsibility legislation



**CITY OF FAYETTEVILLE**  
Position Description

**POSITION TITLE: Sustainability Coordinator**

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EXEMPT (Y/N): Yes  
SUPERVISOR: Mayor  
CITY/EEOC/JG CODES:  
Job Grade: 123

DEPARTMENT: Administration  
DIVISION: Not Applicable  
DATE REVISED: August 2008

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**ESSENTIAL DUTIES AND RESPONSIBILITIES:** *Note: All City of Fayetteville positions require the employee to provide good customer service to both internal and external customers, maintain positive and effective working relationships with other City employees (especially members of his or her own team), and have regular and reliable attendance that is non-disruptive. Other essential duties of this position include the following:*

1. Lead efforts to develop and implement a sustainability plan for the City.
2. Foster the creation of programs that promote urban sustainability and assist divisions to reduce environmental impacts from operations and improve environmental performance.
3. Partner with division heads to creatively incorporate the best ecological practices and policies into viable programs that will enable the City to reduce the consumption of utilities.
4. Provide vision and leadership in the development of a sustainability plan for the City.
5. Advocate and model sustainability concepts within the organization. Serve as a catalyst to produce a culture change within the City that integrates sustainability and environmental values into how the City conducts business.
6. Act as a team leader working with City staff to develop sustainability initiatives and assess their cost effectiveness, technical feasibility and implementation methods.
7. Identify and address barriers to the success of the sustainability plans.
8. Represent the City within the community; increase awareness of sustainability initiatives through participation in civic, neighborhood or professional group activities.
9. Develop a multi-faceted communication strategy within the organization and the community to promote the City's efforts.

10. Develop criteria, policies and procedures for sustainable programs.
11. Establish annual performance targets and report on the City's progress in meeting these goals.
12. Apply for and manage grants to support the implementation of sustainability programs.
13. Analyze and report on the effectiveness of sustainability projects.
14. Provide research, support and advice to Mayor, staff and Council.
15. Build relationships between City, outside organizations and other government entities.

**SECONDARY DUTIES AND RESPONSIBILITIES** include the following:

1. Perform other duties as assigned.

**MINIMUM QUALIFICATIONS**

1. Bachelor's degree in public administration, urban planning, environmental sciences or other related field and five years of progressively responsible experience; or equivalent combination of education and experience.
2. Effectively communicate with others orally and in writing.
3. Ability to make effective and persuasive speeches and presentations on controversial or complex topics to top management, public groups, and/or boards of directors.
4. Ability to function as team leader, partnering with diverse functional units to achieve program goals.
5. Must be proficient in the use of a personal computer and other related software programs. Must be able to effectively operate standard office equipment.
6. While performing the functions of this job, the employee is regularly required to talk or hear; use hands to finger, handle, or feel; reach with hands and arms. The employee frequently is required to move from location to location. The employee must occasionally lift and/or move up to 25 pounds. Standard vision abilities required to accomplish computer and office work.

## Classifications exempt from the Classified Service

### Classifications already exempt prior to January 04, 2008

Key: A/E = already excluded via City Charter  
PA = premium assignment

Classification	Key	
7001	Chief Administrative Officer	A/E
7030	Attorney, City	A/E
7040	Environmental Services Director	A/E
7050	Transportation Director	A/E
7060	Water Utility Director	A/E
7076	Planning Director	A/E
7090	Police Chief	A/E
7008	Human Resources Director	A/E
7010	Chief Financial Officer	A/E
7012	Chief Technology Officer	A/E
7074	Development Services Director	A/E
7080	Parks & Recreation Director	A/E
7095	Fire Chief	A/E
7006	General Services Director ( <i>to be abolished</i> )	---
7014	Revenue Bureau Director	A/E
7020	Government Relations Director (Mayor's Staff)	A/E
7052	Transportation Engineering & Development Director	A/E
7054	Transportation System Management Director	A/E
7056	Maintenance Director	A/E
7085	Emergency Communications Director	A/E
7483	Attorney, Chief Deputy City (City Attorney Staff)	A/E
7655	Engineer, Chief - Water Bureau	A/E
7941	Police Chief, Assistant	PA
7955	Fire Division Chief	PA
7004	Purchasing Director	A/E
7013	FPDR Director	A/E
7022	Neighborhood Involvement and Programs Director	A/E
7024	<b>Sustainable Development Director</b>	A/E
7026	Housing/Community Development Director	A/E
7070	Cable/Franchise Director	A/E
7087	Emergency Management Director	A/E
7482	Attorney, Senior Deputy City (City Attorney's Staff)	A/E
7481	Attorney, Deputy City (City Attorney's staff)	A/E
7940	Police Chief, Deputy	PA
0042	Children's Fund Commissioner's Staff Representative (all commissioners' admin staff are excluded)	A/E
7950	Fire Chief, Deputy	PA
7940	Police Chief, Deputy	PA
7210	Government Relations Lobbyist (Mayor's Staff)	A/E
7345	Auditor, Chief Deputy City	A/E

**EXHIBIT A**

**Classifications exempt from classified service, for incumbents hired after January 4, 2008, as a result of Council approval of Ordinance 181459.**

**Classification**

7653	Engineer, Chief
7113	Business Operations Manager, Senior
7146	Policy Analyst, Senior
7258	Human Resources Operations Manager
7365	Controller
7379	Financial Planning Division Manager
7518	Assistant Chief Technology Officer
7391	Treasurer, City
7486	Legal Advisor
7512	IT Operations Manager
7513	IT Strategic Technology Planning Manager
7990	Emergency Management Operations Manager
7654	Engineer, City Traffic
7977	Emergency Communications Operations Manager
7114	Revenue Bureau Operations Manager
7190	Risk Manager
7233	Sustainable Development Operations Manager
7140	Assistant to Bureau Director
7754	Planning Director, Assistant to
7384	Debt Manager
7267	Affirmative Action/Diversity Development Manager
7532	ComNet Operations Manager

## A SUSTAINABLE DECISION FRAMEWORK FOR ENERGY

### A Policy Proposal for Council Consideration

by  
Jerry Wade

#### I. OVERVIEW

Energy is the capacity to do work, to perform tasks. Most of the tasks in Columbia are done primarily with three energy forms, electricity, natural gas and the transportation fuels, gasoline and diesel with some ethanol. However, in spite of how much energy we purchase, no one wants to "own" a KW of electricity, 100CCF of natural gas or a gallon of gasoline. What we want is the work the energy does for us, the work that is accomplished. Examples of tasks include propelling our vehicles, heating and cooling our homes, running the many electric motors that drive our household appliances, powering our industries and businesses, providing light, and making our various technologies run. We don't concern ourselves with the type of energy as long as the work gets done at minimum cost, is available when we want it, and has minimum impact on our environment.

Historically, energy policy and decisions have been resolved by meeting supply requirements. Such policies and decisions, however, can also be addressed by concentrating on demand, focusing on conservation and efficiencies. While this has been successful in reducing peak demand, an energy management based on a comprehensive analysis, has gone wanting.

This decision model was quite adequate when energy supplies were abundant, predictable, and inexpensive. That is no longer the case. We are now in an era where there are multiple sources of energy with increasing and unpredictable costs, changes in the regulatory structures and rapid changes in a wide range of energy technologies.

The old paradigm is an inadequate basis for energy policy and decisions and may actually lead to decisions not in the best interest of the community. A new paradigm that is not dominated by the traditional supply notions is needed. Policy needs to allow for agility in decisions and a wide range of potential energy options to be included in the analysis.

It is the purpose of this paper to propose a sustainable decision model for energy that is based upon efficiency in work as the end product of energy supply systems.

#### II. A SUSTAINABLE DECISION MODEL FOR ENERGY

Energy use performs work. A community's energy pattern is set by the way energy is delivered to the place work is done. The purpose of energy policy and a sustainable decision model is to create the community's energy pattern so that the work is done in the most cost effective manner possible taking into consideration critical community values. Proposed here are four criteria or values:

1. Increasing energy productivity;
2. Reducing negative environmental impact;
3. Provide greater local control on impact decisions on energy patterns; and
4. Retaining more energy dollars in the local economy.

Energy productivity is the amount of work done per energy unit used. This value emphasizes the importance of energy efficiency. We concern ourselves constantly with productivity. Productivity is the value we get out of the energy we put in. "Getting more for less" is a statement about productivity and is a key component for businesses remaining competitive and profitable. This must include energy productivity as well as labor productivity.

The second value, reducing negative environmental impact, affirms the Community's commitment to good environmental behavior through both public and private energy decisions.

The next value highlights the importance of Columbia maintaining as much direct control of the energy supply systems as possible. Local control of energy systems and a diversity of sources enhance system stability, predictability, and resistance to unplanned upsets.

The final criteria or value is to ensure that Columbia's energy patterns minimize the cost to the Columbia economy. Leakage of energy dollars is a large source of economic loss in the Columbia economy. This is the loss of money from the Columbia economy to pay for imported products. Keeping energy dollars within the local economy is a potential source of economic development for Columbia. Of Columbia's approximate \$69,700,000 electric bill, approximately \$66,00,000 is leakage. It is the bill Columbia pays to its suppliers, dollars from our local economy to pay costs outside of the community, creating jobs and economic activity elsewhere.

Energy supply must ensure we have the energy available to meet the demand necessary to get the work done. A sustainable energy decision model recognizes data and analytical capability to make our energy decisions so that the work gets done in the most economical manner possible, minimizes the negative environmental impact, and enhances the well-being and quality of life of the community.

### III. IMPLEMENTING THE MODEL

A sustainable decision model for energy would be the framework for a comprehensive energy plan that localizes energy sources, increases community economic and social benefits, reduces the contribution to pollution and increases the work performed for each unit of energy.

#### A. Analysis of Energy Productivity and Cost Efficiency.

1. Basic Work Data.

- a. The major types of work or tasks performed (what work is done).
- b. The amount of work in each type (how much work is done).
- c. The type of energy used for each type of task (how is the work done).

From these data, energy productivity and cost per unit of work can be calculated.

**B. Energy Productivity and Cost per Unity of Work.**

These work data can be used to determine for energy productivity and the cost per unit of work.

**C. Strategies of Energy Management.**

To develop strategies for energy management, the productivity indices and the work

unit cost can be analyzed for potential for change. Three considerations are critical.

1. Are there opportunities for doing the work with higher energy productivity or cost reductions?
2. Would other forms of energy do the work with higher energy productivity or reduced cost?
3. Are there opportunities to eliminate work that doesn't need to be done?

**D. Analysis of Energy Delivery Systems.**

1. Evaluate current patterns of energy delivery systems.
2. Are other delivery systems technically available or under development.

For all electric energy systems, the analysis should include location and type of generation, energy productivity of each system, pollution impact, cost per unit of energy delivered, 30 year cost projections, technically ready to deploy, impact on local economy with special attention to economic leakage, and potential for local control.

It is important that the cost analysis allow easy comparison of alternative sources of energy to show opportunities to increase energy productivity.

#### IV. STRATEGIC ACTION PLAN

With the data and analysis in place, a strategic action plan can be developed. The emphasis must be on increasing productivity, reducing pollution, economic efficiency, and local control.

A strategic action plan should include broad outcomes with timelines and goals within each category. Recommendations for action will compare energy productivity in each category of work with cost estimates.

Questions that should be answered are:

1. What additional activities should the electric utility offer?

2. Which existing programs should be expanded, just continued or dropped?
3. What policy changes or new policies are necessary?
4. Are there changes in City Codes and State and Federal Regulations to be considered?

Every program of the utility should have projected timelines. Rather than an accumulation of programs, the city will have a comprehensive plan with strategic actions that are achieved by purposeful definition of each program's measurable results. The artificial distinction between energy supply and demand should disappear. They are both part of the strategic plan to get work accomplished. The sustainable decision model for energy puts the full range of possible energy actions together to allow for the best decisions based on key principles. The data and analyses in the plan must be continually updated as economic factors and technologies will continue to change.

*What does each program or  
tool mean in energy  
cost?*

## V. CONCLUDING OBSERVATIONS

### A. Making the changes.

Given the rapid changes affecting energy generation (technological advances, increased efficiencies, etc.), the traditional decision model fails. A new model that anticipates these changes and which provides greater flexibility to engage a wide range of options, a model that goes beyond traditional supply and demand, should be developed.

Often, when a new model is proposed, the tendency in organizations is to simply redefine what is already being done, a reshuffling of the deck so to speak. Although the data base is not available, there is enough data to launch a new decision model.

### B. Resources.

There are a growing number of examples of communities and utility companies changing the way they make and implement energy decisions. A few of those are cited below.

The Snohomish Public Utility has launched a major conservation effort. The General Manager stated, "We plan to address growth first and foremost by working with customers to achieve all cost-effective measures" (Public Power Weekly, No. 28, July 14, 2008, p. 7).

A recent study, "Energy Efficiency, Innovation and Job creation," documents California's efforts to meet future energy needs through energy efficiency (Public Power Weekly, No. 44, October 27, 2008).

The New York Power Authority will install 4.8 MW of generating capacity with fuel cells at the redeveloped World Trade Center. The first fuel cell was to be delivered January, 2009 (Public Power Weekly, No. 28, July 14, 2008, p. 6).

One of the more intriguing projects comes from the Tennessee Valley Authority. They determined they needed 1,400 MW additional capability. Instead of moving toward new generation capacity, they committed to build a 1,400 MW plant by 2012 from saved energy through increasing energy efficiency. They went to their customers to engage them in designing the programs to collaboratively build the plant. The 1,400 MW plant represents 4% of TVA's current load (Public Power Weekly, No. 46, November 10, 2008, p. 3).

### C. Moving forward.

The IRP (Integrated Resource Plan) provides an enormous amount of data. Because of the IRP and other information within Water and Light Department, much of the data base and initial analyses suggested here can be done now. The IRP is based on traditional models and does not provide the sustainable energy decision model. The future demands the ability to respond to rapidly changing national political conditions, environmental restrictions, energy technologies, and economic dynamics.

Using the TVA model that built an "energy efficient" power plant representing 4% of system load in 3 – 4 years, can Columbia build a 33 MW "energy efficiency" power plant representing 10% of system load in 10 years, not the 20 years suggested in the IRP? When that plant is finished, hopefully ahead of schedule, then lets build another one, maybe 35 or 40 MW by 2028. Along side this "power plant," lets add 75 – 100 MW of local generation capacity, using fuel cells, biomass and other decentralized technologies as they become cost competitive.

How much local supply can be built using a variety of technologies that are expected to become cost effective over the next several years. Will there be and biomass available to meet expected demand? How much of the projected increased demand can be met by increased energy productivity and local supply systems cost effectively? Will we be ready to take advantage of the changes we know are coming?

## VI. SUMMARY

A decision model builds on a data base, analyzes the data and assesses the impact of any recommendations on the agreed upon criteria or values. The sustainable decision model for energy presented here begins with the concept of work. It builds a data base covering the energy used to do the work done in Columbia. Actions to change the energy use and supply system would be identified and analyzed to determine cost effectiveness and return on investment for each possible action. The actions would be assessed for the impact on the criteria or values discussed in Section II. The results will be a series of energy actions from which a selection can be made for Columbia's future that are cost effective, a wise use of both public and private energy investments, and move Columbia to its desired sustainable energy future.

Steven Hanson  
University of Illinois – Springfield  
April 15<sup>th</sup>, 2009

Columbia Missouri City Council  
701 E. Broadway  
5<sup>th</sup> Floor, Daniel Boone Building

Dear Council members,

I am commenting this evening for two reasons. First, I am commenting as part of a class project for my Sustainable Development class. Secondly, I am a citizen of Columbia who has experience working with government bodies to implement institutional sustainability. I am a graduate student at the University of Illinois at Springfield, and I'll be graduating this Spring with a Master's in Environmental Studies with a concentration in Sustainability. For my graduate project, I am working with Daniel Boone Regional Library to implement a green purchasing program roughly based on the federal government's Environmentally Preferable Purchasing program. Shortly, I'll be providing the library's administration with recommendations that are could reduce their power consumption by one-quarter., while saving money and purchasing the most sustainable products.

What I hope to impart on the council this evening is my perspective on the next step for the city to take in its desire to work towards sustainability. I have sat in on some of the meetings that city staff has had with the consultants to discuss what they can offer the city in the development of our sustainability plan. Prior to meetings, I developed a list of probing questions designed to evaluate what a sustainability plan would like if generated by the consultants, and what the plan would like if it was generated by city staff. These questions and my answers are provided in my full written comments.

From my analysis, I have determined that the product produced by the consultants interviewed would be focused primarily on technological solutions for increasing energy efficiencies in city buildings, major commercial and educational institutions, and power generation. This represents a popular form of sustainability that has been undertaken by many institutions. This would be similar to the University of Missouri placing sustainability under the responsibility of Energy Management, for those of you familiar with MU's organizational structure.

Conversely, if the city staff, including a newly hired sustainability professional, were to develop the sustainability plan, I would expect that the plan would have a greater focus on community issues related to sustainability. The city government already has a high level of interaction with community in its decision-making processes, and I would expect this to be utilized greatly.

The plan development process, as handled in-house, would look like this: First, city staff will develop a roadmap to take in the plan development process. Likely, several options would be discussed in a work session with Council. Following the adoption of the roadmap, a citizens committee would be formed to

advise throughout the development process. Hopefully this committee will be seated by persons recruited to apply for it because of their particular specialties related to sustainability. During the plan development process, actions can be taken to demonstrate the efficacy of sustainability. The recommendations that I'll be making for the library would work well for this. These actions, along with the other programs already in place, can then be marketed to the community as part of a sustainability package, all before the plan is in place. This will be beneficial for the planning process because it will hopefully increase citizen participation.

The advantages for using city staff instead of consultants are primarily focused around the interaction and concentration on working with the community and stakeholders. Looking at the efforts done by other cities, consultants will likely play a role, but more of a defined role instead of the broader role being examined currently. For instance, the city of Davis, California, originally was going to seek a consultant to study the community's current practices and establish a baseline for their sustainability efforts. In the end, this work was done by the city. Other cities have used consultants to study their carbon footprints, or, in the case of Columbia, make recommendations for future energy generation. We already have in a place a community visioning process, which, again, is something that other cities have had to develop with the help of a consultant. I foresee that they city will likely hire a consultant for improving institutional efficiencies. However, the hiring of a consultant to do this work at time might be premature. I say that because we can be assured that any recommendations made by a consultant will require investment in capital equipment, we should be wary of hiring a consultant to make recommendations we might not be able to afford. Also, the recommendations made by the consultant will necessarily reflect their area of expertise and might not represent the most cost-effective way to achieve the same reductions.

## Example of Staff Sustainability Plan Development Process

### Planning Phase

- Develop roadmap for planning process
  - Possibly include
    - Assessment of current practices and programs
    - Define stakeholders and their roles within the planning process
    - Define management structure within city government
    - Develop ongoing management and quality assurance program
    - Determine areas with least cost, greatest benefits
    - Set goals for each phase
- Develop community education plan
- Establish Sustainability Planning Committee
  - Comprised of citizens and staff
    - Citizen subcommittee
    - Staff Subcommittee

- Approximately 6-9 months
- Led by sustainability coordinator serving directly under assistant city managers
- Staff determine if any resolutions need to be passed by Council

#### Immediate action phase

- Develop communication channels
  - City – colleges and MU
  - City – businesses
  - City – community
- Pick the low-hanging fruit
  - Implement easy, cost saving, energy saving practices
- Develop a marketing strategy and begin it
- Months 3 - 15

#### Phase I

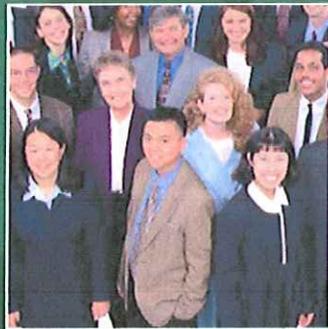
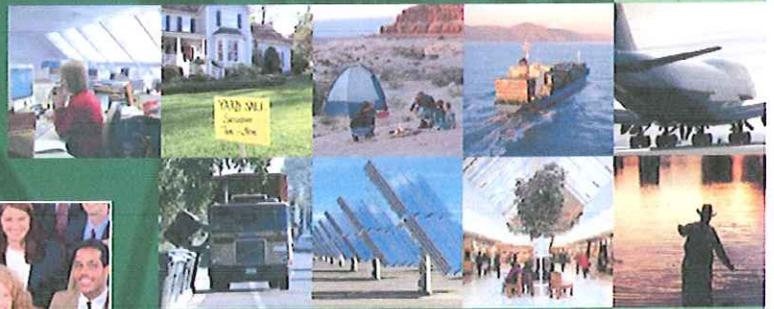
- Department managers begin efforts towards meeting assigned goals
- Implement educational program
- Establish permanent committee
- Months 12 – 24

#### Questions:

1. Will the consultant focus mainly on institutional aspects, such as improved building efficiency, reduced resource consumption, and other aspects of sustainability limited internally within the City government?
  - a. Yes
2. Will the consultant address the organizational structure of the city and where best to place a sustainability director position?
  - a. Probably
3. Will the consultant provide a method for the assessment and improvement of procurement to make purchases more environmentally preferable?
  - a. No, unless specifically requested which might require a third-party
4. Does the consultant have experience working with publicly-funded entities to improve procurement practices?
  - a. No

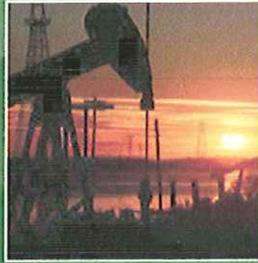
5. Will the consultant address energy consumption by the City government alone, or address energy consumption throughout the city limits?
  - a. Yes
6. Will the consultant address energy generation and purchasing, and will this be a duplicative effort of other consultants?
  - a. Yes, they would address energy generation, and some might be duplicative but most wont.
7. What experience does the consultant have working with the community at large?
  - a. More experience working with commercial clients and individuals
8. Will the consultant utilize community involvement to develop the plan?
  - a. Little to none
9. Will the consultant identify stakeholders outside of City government?
  - a. Major commercial stakeholders that would be involved with institutional sustainability, but not individuals and groups as would be in community sustainability.
10. If the consultant will utilize public input and interaction in the development of the plan, is there city staff equally capable, or more capable, of performing this function?
  - a. Because the consults would likely work on issues beyond the understanding of the general public, I would only foresee minimal involvement of the general public which could be done by city staff but would not be a significant extra cost for the consultant to do.
11. What expertise does a consultant have that current city staff, or could be required of a sustainability professional, does not have?
  - a. The consultants interviewed are experts at their product lines and associated products associated with institutional sustainability. Its doubtful that current staff have this knowledge, and its unlikely that a sustainability professional would have this knowledge.
12. Will the contracting of a consultant preclude the need for the city to hire a sustainability professional for 6 months? One year? Indefinitely?
  - a. The scope of the consultants recommendations would not require a sustainability professional. However, the vision of the Council would call for sustainability professional be hired as planned for in the city budget.
13. What results could be reasonably expected from a consultant and from following through with their recommendations?
  - a. The consultants would provide the city with a list of recommended improvements to be made that would require large expenditures, but would have a defined and guaranteed payback.
14. Will a consultant perform a search for grants that would be available to assist the City in the implementation of the plan?
  - a. Possibly

Introduction to  
**Sustainability**





# It all starts with



Sustainability means satisfying our lives both now and in the future by not using more natural resources than nature can regenerate. As human pressure is slowly exceeding the globe's ecological capacity, sustainability hinges on reducing overall human pressure.

SEEC tries to reduce that pressure by showing people what they can do to reduce their impact on the world and, in conjunction with the millions of others putting these ideas into action, illustrates how these individuals are making a real difference.

As an organization, our continued success relies heavily upon the future health of the planet. That's why we have embraced sustainability throughout our organization and initiated the SEEC program.



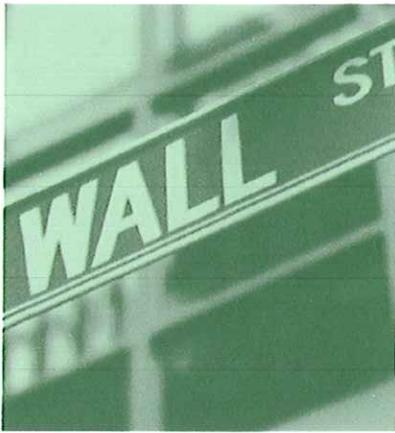
Achieving financial success while protecting the environment and addressing social problems – that’s sustainability. It’s a growing trend, and now is the time for individuals and organizations to start reaping the benefits for themselves, their companies and their communities.

### **Objectives of this module**

- Motivate you to consider sustainability when making choices at work and home
- Help you understand the financial, social and environmental benefits of sustainability for your company, yourself and your community
- Motivate you to participate enthusiastically in the SEEC program
- Encourage you to tell others about sustainability

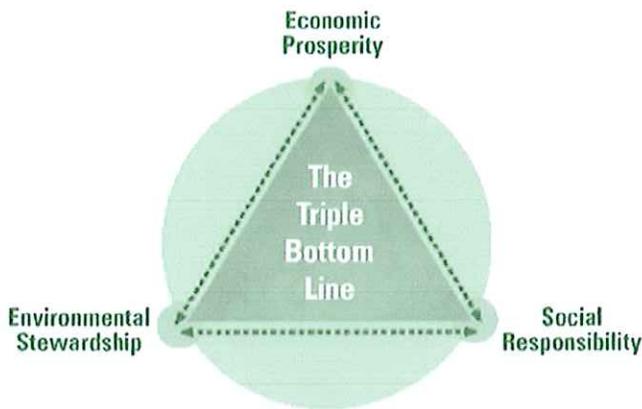
### **Contents of this module**

- What is sustainability?
- The growth of sustainability
- “Green” buildings as part of the solution
- How your company is embracing sustainability
- What you can do to adopt sustainability at work and home
- How you will participate in SEEC
- The SEEC challenge

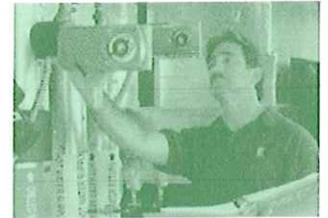


# The Triple

ECONOMIC PROSPERITY   ENVIRONMENTAL STEWARDSHIP   SOCIAL RESPONSIBILITY



Our lifestyles also result in emissions of harmful pollutants into our air and water. And they can contribute to social problems such as chronic health ailments, traffic congestion and poor working conditions for laborers.



Energy, water and natural resources are limited. Environmental damage and worsening social conditions are problems our children and grandchildren will have to solve.

As a result, we need to find solutions.

- Use resources more efficiently.
- Minimize our negative impacts on the environment.
- Improve people's lives.

## Our Consumer Society

Supporting our high standards of living in North America requires that we consume a lot of the world's resources.

- Energy resources – oil to fuel our cars, trucks, buses, trains and planes; natural gas and coal to generate electricity to power virtually everything we do at work and play.
- Fresh water – for drinking, irrigating farm fields and lawns, cleaning, waste removal and manufacturing.
- Other natural resources – to make the bottles, cans, paper, cardboard and other packaging and products we discard.

### **FACT**

*A decrease of only 1% in industrial energy use would save the equivalent of about 55 million barrels of oil per year, worth about \$1 billion.*







# Sustainability Is

ECONOMIC PROSPERITY   ENVIRONMENTAL STEWARDSHIP   SOCIAL RESPONSIBILITY



**FACT**  
Research shows that an average household with an electric water heater spends about 25% of its home energy costs on heating water.

## Sustainability Is Catching On

Interest in sustainability is growing among individuals and organizations.

- Consumers are buying more ENERGY STAR® products and energy-efficient vehicles.
- 70% of American consumers are more likely to buy a product if they know the manufacturer uses environmentally friendly practices.
- 790 CEOs believe sustainability is vital to profitability.
- Net Impact: "It's not just the tree-huggers anymore; it's more mainstream."
- Robert Ridge, Vice President – Health, Safety and Environment for ConocoPhillips: "... sustainable development is just good business."



**ENERGY STAR®**

Look for the ENERGY STAR® label to make sure you're purchasing the most energy-efficient appliances, electronic products, lighting – even an entire new home.

# Catching On

## Sustainability Success Story

### Cambridge Memorial Hospital, Ontario

Cambridge Memorial is a community hospital serving a population of 120,000 people in southwestern Ontario.

Since 1997, CMH has been committed to becoming more energy efficient and environmentally responsible.

With the help of Johnson Controls, the hospital implemented a number of sustainable improvements to its facilities.

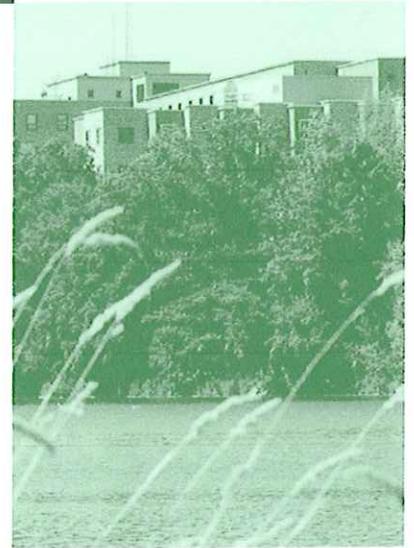
- Upgrades to heating, cooling and ventilation systems.
- Installation of energy-efficient lighting fixtures.
- Improvements in automated systems that manage energy use.

As a result, CMH's consumption of natural gas was reduced by 12%, electricity use by 12% and greenhouse gas emissions by 22%.

In addition, environmental awareness programs initiated by CMH's "Green Team" have made the hospital staff more environmentally conscious at work and home, and improved the hospital's public image within the community.

Dedication to sustainability has earned CMH significant environmental recognition including ISO 14,001 certification as the North American leader in the areas of environmental awareness, waste reduction and sustainable programs within a hospital setting.

Why go to these lengths to adopt sustainable practices? "It's the right thing to do," says Cambridge CEO Helen Wright.



**FACT**  
*The United States imports more than seven million barrels of oil per day.*





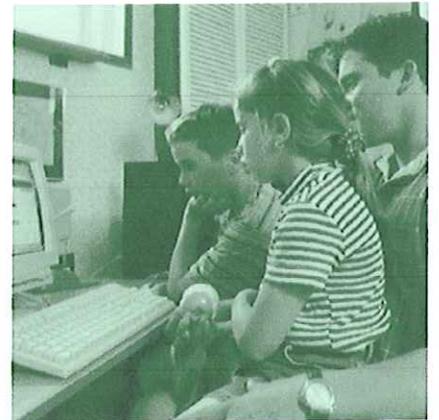
# Addressing the

ECONOMIC PROSPERITY   ENVIRONMENTAL STEWARDSHIP   SOCIAL RESPONSIBILITY

## The Why and How of Sustainability

Many companies and other organizations are feeling pressured to demonstrate success in all three elements of their triple bottom line: economic, environmental and social.

Here's where the pressures are coming from and how organizations are addressing them.



### **FACT**

*The United States spends about \$440 billion annually for energy. Energy costs U.S. consumers \$200 billion and U.S. manufacturers \$100 billion annually.*

## Economic Issues

### Pressures

- Cutting expenses
- Investors demanding full disclosure

### Sustainable Solutions

- "Green" buildings lower costs
- Disclosing sustainable efforts helps investors

### Example

Upgrades to their heating, air conditioning, ventilation and lighting resulted in nearly \$1 million in cost savings for STERIS Corporation – a manufacturer of products for the health care industry headquartered in Mentor, Ohio.




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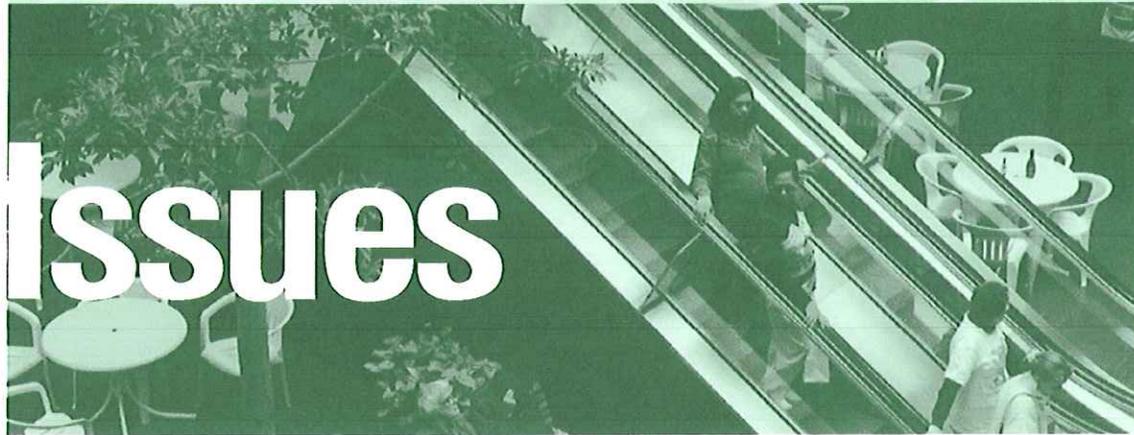


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# Issues



## Environmental Issues

- Pressures**
- Marketplace pressures
    - Emissions credits
    - Delay or avoid more costly government regulations
    - Improve their public image
  - Legal pressures
    - State and federal regulations
    - Kyoto Treaty requirements

- Sustainable Solutions**
- Improved lighting, building controls and windows
  - Recycling, reductions in water usage and environmental transportation options

**Example** Replacement of an inefficient medical waste incinerator at the VA Medical Center in Salt Lake City, Utah, reduced the Center's potentially harmful emissions.



## Social Issues

- Pressures**
- Shareholder and other advocacy groups are pressuring companies to be better corporate citizens
  - These same people are demanding that companies disclose more information about the social impacts of their business

- Sustainable Solutions**
- Sustainable buildings create healthier, more productive environments for workers
  - Sustainability reports provide complete information to investors

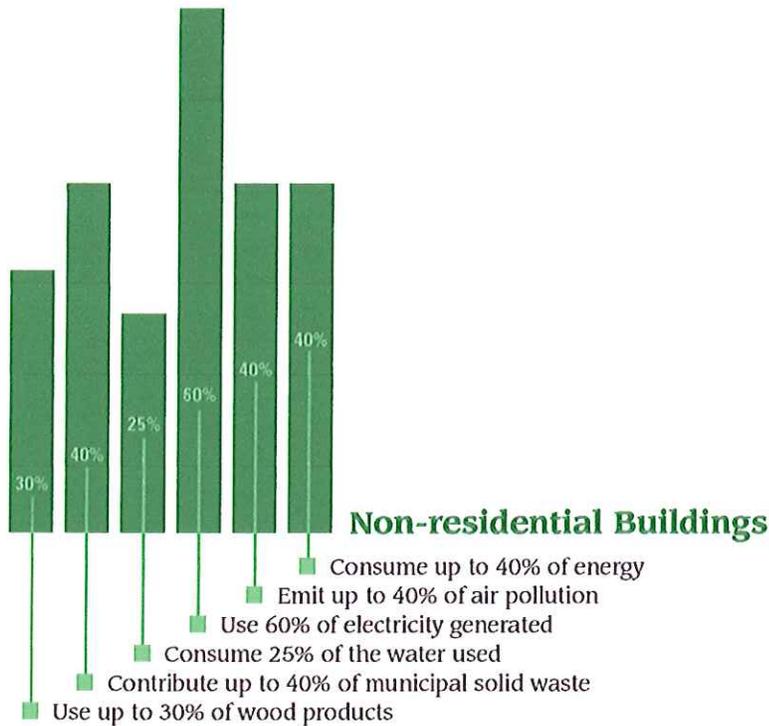
**Example** Installation of a highly efficient power generation system at a military base in Petawawa, Ontario, freed up funds and reduced the chances of a disruptive blackout, permitting Canadian military forces to focus on their mission of protecting citizens at home and abroad – an important social responsibility.





# Green

ECONOMIC PROSPERITY ENVIRONMENTAL STEWARDSHIP SOCIAL RESPONSIBILITY



**FACT**  
82% of Americans agree that private companies should train their employees to solve environmental problems.



## Green Buildings

- Save energy and money
- Are healthier workplaces
- Improve morale and productivity
- Reduce absenteeism

The U.S. Green Building Council developed the Leadership in Energy and Environmental Design (LEED) Green Building Rating System®.

LEED certified buildings meet many minimum requirements.

- Efficient energy and water use
- Protecting building occupant health
- Improving employee productivity
- Reducing impact on the environment

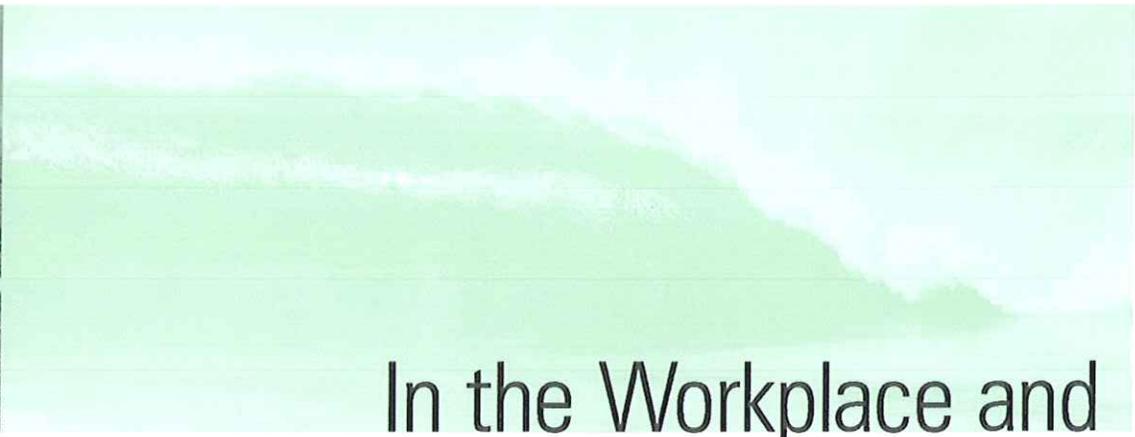
LEED improvements may increase the cost of constructing or renovating a building by a small fraction, but they pay back ten times the original investment over the life of the building.

There are hundreds of LEED certified buildings in at least 12 countries – including the U.S. and Canada. There are thousands of registered projects under construction or in design.

### Organizations committed to LEED include:

- Johnson Controls
- Pentagon
- U.S. General Services Administration
- State of Maryland
- City of Chicago
- Furman University
- Duke University
- JohnsonDiversey
- Microsoft
- Johnson & Johnson
- Liberty Property Trust, Pennsylvania
- Russellville, Arkansas School District
- Buffalo, New York Public Schools
- Hewlett Packard
- Milliken Carpets
- National Geographic Society





# In the Workplace and

ECONOMIC PROSPERITY ENVIRONMENTAL STEWARDSHIP SOCIAL RESPONSIBILITY

## Sustainability at Work and Home

Adopting sustainability at work and home means thinking about the economic, social and environmental consequences of the decisions we make every day.

### Exercise

#### Sustainability and You

The decisions we make at work and home that involve energy, water, lighting, indoor air quality, transportation and cleaning products have triple bottom line consequences.

Here's an example at work: You decided to start using a personal heater under your desk when you're at work during the four coldest months of the year. Here are the triple bottom line impacts of your decision.

**Economic** – Depending on the size of your heater, how much you use it and the cost of electricity in your community, it could consume as much as \$150 in electricity to run your heater over the four months.

**Social** – While you will be more comfortable, your heater could upset the temperature balance in your office, leaving your co-workers too hot or too cold.

**Environmental** – Because you're using more power, your local utility is generating more electricity, and pumping more pollution into the air in the process.

Here's another example, this one at home:

You decide to install a programmable thermostat in your home.

**Economic** – If you set the thermostat to automatically reduce the temperature in your home by 10°F for eight hours every night, you will lower your heating bill by 10%.

**Social** – Your home is still comfortable for your family, because the thermostat drops the temperature after everyone is snug in their bed, and raises it again before anyone gets out of bed.

**Environment** – You're using less electricity, so your utility is generating less, and emitting fewer pollutants into the air.

This example illustrates how reducing heat in winter saves money. The same principle holds true for cooling in the summer.

In the spaces provided below, identify a decision you've made – or are in the process of making – and list the triple bottom line impacts.

*You have three minutes in which to complete this exercise.*

Decision:

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Economic impact:

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Social impact:

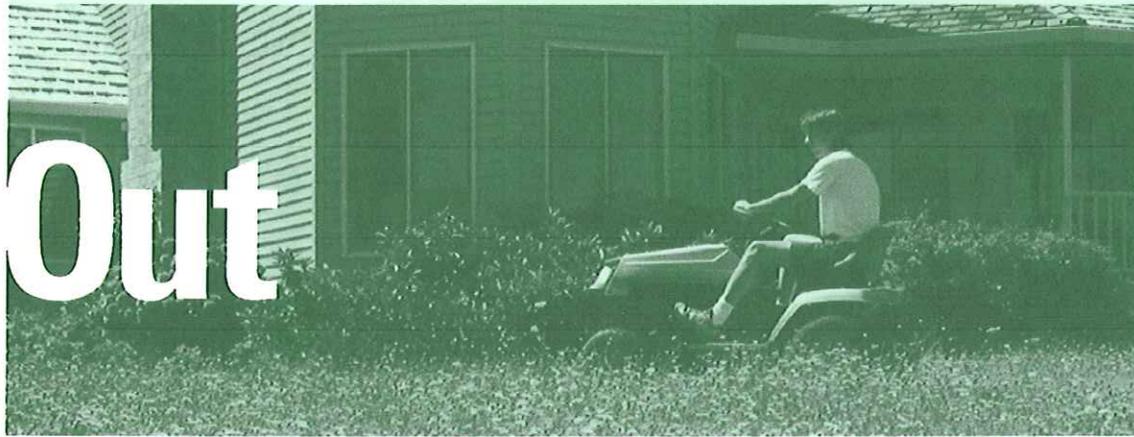
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Environmental impact:

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# Out



Here are the topics of the next nine modules that make up the SEEC program.

#### ■ **Energy and You**

Discover our current and future energy sources, the benefits of energy efficiency, the company's efforts to increase energy efficiency and how to save energy at work and home.

#### ■ **Illuminate Your Life**

Learn how to properly use lighting, how improvements to lighting in our work places are beneficial and how you can save money making more energy-efficient lighting choices at home.

#### ■ **Getting to Know H<sub>2</sub>O**

Water is all around us and so little of it is readily drinkable. You'll see how actions to improve water efficiency in our work places and at home can make a real difference.

#### ■ **The Great Indoors**

Indoor Environmental Quality (IEQ) affects us more than you might imagine. Find out what can be done to improve IEQ and how we can contribute to better IEQ.

#### ■ **Watching Your Waste Line**

Why is recycling important at work and home? What can we do to reduce-reuse-recycle more of what we throw away?

#### ■ **Reinventing the Wheels**

Discover how our vehicles affect the environment, what environmentally-friendly transportation options are available and their long list of benefits.

#### ■ **A Change of Climate**

Greenhouse gases are altering weather patterns and contributing to global warming. Take steps now to reduce our impact on global climate before it's too late.

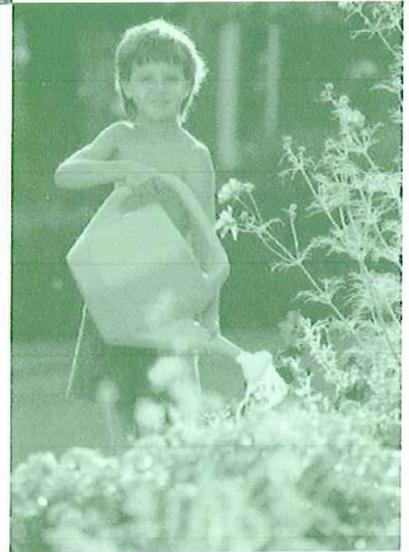
#### ■ **Greening the Supply Chain**

Make your money go even further. Find out how to purchase everyday products and services, at work and at home, with an eye on the environment and your community.

#### ■ **Sustaining the Momentum**

The financial benefits of sustainable practices are going to get you started, but it will be the triple bottom line impact sustainability has that will keep you going.

You may receive items to help you begin adopting sustainability at work and home. These items may include a tire gauge, a refrigerator thermometer or a high-efficiently shower head.

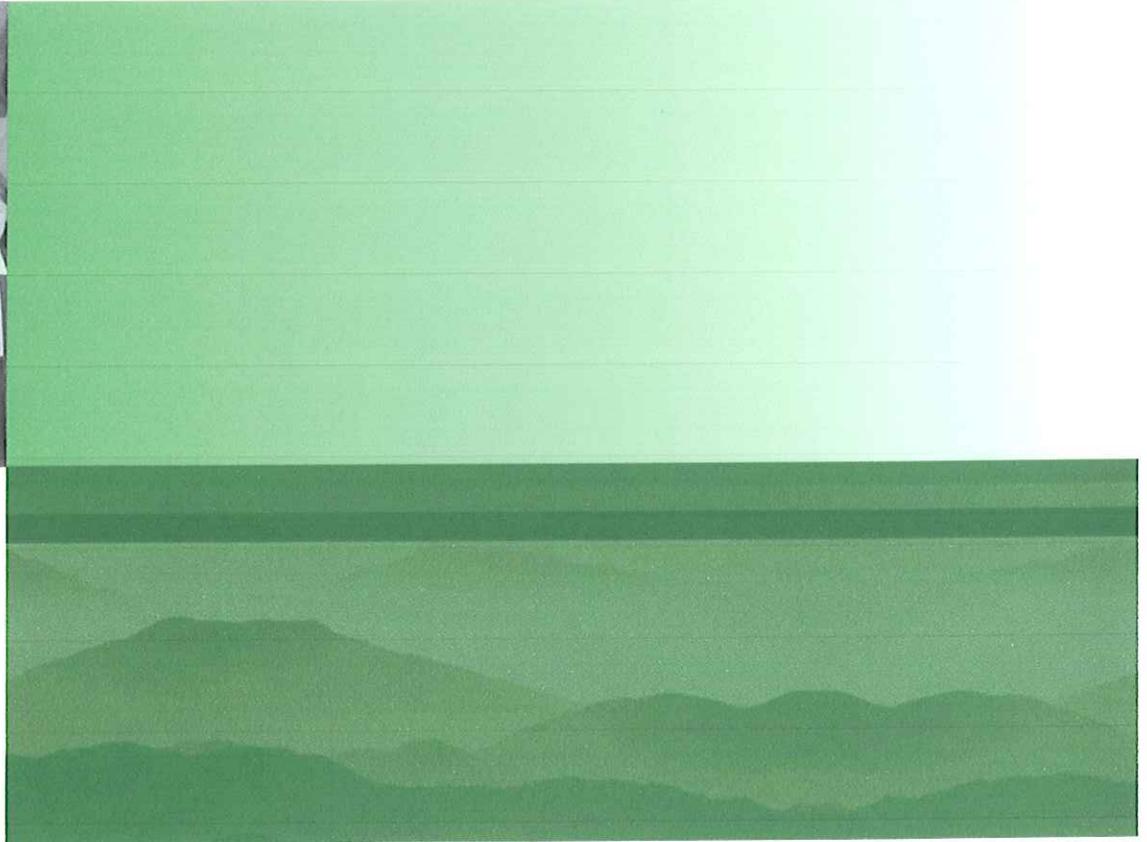


**FACT**  
Total U.S. residential energy consumption is projected to increase 17% from 1995 - 2015.

## The SEEC Challenge

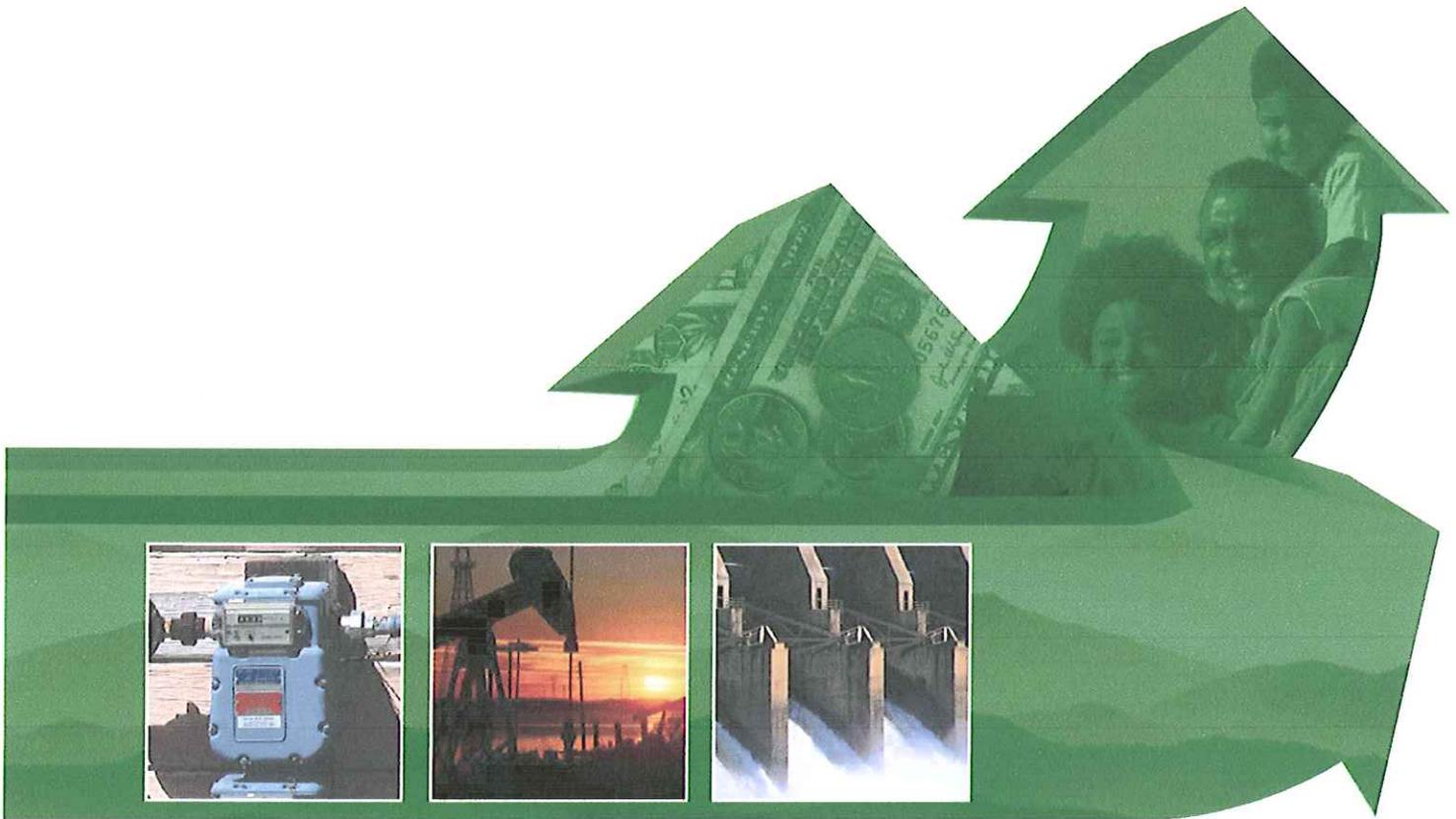
Each module of SEEC contains a simple competition as part of the overall SEEC Challenge. For each module, you and your co-workers compete for various rewards based on the sustainable knowledge you learn and the sustainable actions you take. It's a fun and exciting way for you to become engaged in those elements that will positively impact the company's triple bottom line as well as your own personal triple bottom line.

For more details about the SEEC Challenge, read the special insert found in the pocket of this workbook.



## Summary

- Sustainability means adopting lifestyles that meet our needs, without compromising the ability of future generations to meet their needs.
- A growing number of businesses and individuals are enjoying financial growth while protecting the environment and being socially responsible.
- Sustainability is not just a fad; it's permanently changing the way in which businesses operate and individuals lead their lives.
- Sustainability benefits us financially, socially and environmentally as individuals, as a company and as a community.
- Green buildings that achieve LEED certification are one way in which many organizations are embracing sustainability – the National Geographic Society is a dramatic example.
- In the remaining SEEC modules you'll be learning how to adopt sustainable practices with your use of energy, indoor environments, lighting, water, recycling, transportation and cleaning products and practices.
- The SEEC Challenge will help make adopting sustainability exciting and rewarding.



## Resources

If you would like to learn more about sustainability.

### ■ Books

- ***Dancing with the Tiger*** -  
Learning Sustainability Step by  
Natural Step  
by Brian Nattrass & Mary Altomare
- ***State of the World 2004*** -  
The Consumer Society  
by the Worldwatch Institute
- ***Greed to Green*** -  
The Transformation Of An Industry  
And A Life  
by David Gottfried
- ***The Principles of Sustainability***  
by Simon Dresner

### ■ Web Links

- <http://www.naturalstep.org/>
- <http://www.naturalstep.ca/>
- <http://www.sustainabilityinstitute.org/>
- <http://www.epa.gov/>
- <http://www.iisd.org/>
- [www.usgbc.org](http://www.usgbc.org)
- <http://www.sustainability-index.com/>
- [www.energystar.gov/](http://www.energystar.gov/)
- [www.nef1.org](http://www.nef1.org)
- [www.johnsoncontrols.com](http://www.johnsoncontrols.com)