

UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN

Facilities & Services

Physical Plant Service Building  
1501 South Oak Street  
Champaign, IL 61820



June 16, 2010

Robert Romo  
Senior Program Officer  
Illinois Clean Energy Community Foundation  
2 North LaSalle Street, Suite 950  
Chicago, Illinois 60602

Dear Mr. Romo:

Please consider this request for full reimbursement of the Lighting Upgrade Project grant awarded to the University of Illinois by the Illinois Clean Energy Community Foundation in April 2008. We have completed the project to our satisfaction and request reimbursement based on this accomplishment.

This project has achieved a reduction of 1,970,466 W in 31 campus buildings. In accordance with the grant agreement, I request the associated grant funds totaling \$1,182,280. Additional documentation is attached to this letter.

Confirmation of your acceptance of this submittal is requested. Please contact me if additional information is required.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tom Abram', written over a horizontal line.

Tom Abram, CEM, LEED AP  
Sustainability Coordinator, Facilities & Services  
University of Illinois at Urbana-Champaign  
1501 S. Oak Street, MC-800  
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## Educational Efforts

We have carried out several communication efforts on the lighting retrofit project. During and after construction, we place signs in the affected buildings educating the building occupants and users about the project. There have been several articles, internal and external, that discuss our sustainability and energy conservation efforts. We have made an effort to include the lighting retrofit project in these articles. We have also developed a fact sheet on the project to distribute to interested parties. In each case, we make a point to mention the contribution from the ICECF. Sample signs and articles from these efforts are attached.

## System Description

We used a High Efficiency T8 lamp-ballast system, combining 3100 lumen Philips Alto Advantage lamps and Advance IOP electronic programmed rapid start ballasts with a ballast factor of 0.77. This combination gives an efficacy of approximately 99 lumens per watt on a typical 2-lamp fixture. When appropriate, we have also installed X-tra reflector kits and reduced the fixture quantity accordingly to further reduce the fixture wattage.

Tables detailing the expenditures, wattage reductions, and fixture types for each building are attached.



**Figure 1:** Law Building Retrofit in Progress



**Figure 2:** Law Building Retrofit – Before (Top) and After (Bottom)

Facility Name	Constr. Start	Constr. Complete	Building Gross Sq. Ft	Fixture Count	Total Construction Cost	Watt Reduction	ICECF Grant @ \$.60/W	Annual kWh Savings	Net Cost to UIUC	Notes
Advanced Computation Building	11/10/2008	12/8/2008	45,344	531	\$36,095	19,199	\$11,519	84,092	\$24,575	
Agricultural Engineering Sciences Building	5/4/2009	6/15/2009	103,565	1236	\$93,556	44,202	\$26,521	193,605	\$67,035	
Altgeld	12/19/2008	1/23/2009	79,719	740	\$40,672	28,307	\$16,984	123,985	\$23,688	Classrm reno project funded this work
Armory	4/21/2009	5/26/2009	256,609	2046	\$111,143	71,361	\$42,817	312,561	\$68,326	
Beckman	1/20/2009	2/20/2009	358,088	5507	\$344,350	195,710	\$117,426	857,210	\$226,924	
Bevier	12/18/2010	3/12/2010	157,190	1982	\$94,286	77,373	\$46,424	338,894	\$47,862	
Child Development Lab	11/10/2008	12/6/2008	23,181	314	\$23,520	11,529	\$6,917	50,497	\$16,603	
Davenport	12/11/2009	2/18/2010	110,941	2030	\$98,526	82,909	\$49,745	363,141	\$48,780	
Engineering Sciences Building	3/2/2009	3/20/2009	107,772	701	\$48,038	25,200	\$15,120	110,376	\$32,918	
English	7/7/2008	7/22/2008	121,011	1006	\$48,552	56,009	\$33,605	245,319	\$14,947	
Everitt Electrical Engineering Building	4/9/2009	6/29/2009	122,204	2059	\$108,048	76,787	\$46,072	336,327	\$61,976	
Foreign Language	5/15/2009	9/24/2009	117,714	2694	\$183,526	96,984	\$58,190	424,790	\$125,335	
Freer	11/16/2009	2/8/2010	93,930	629	\$86,041	22,967	\$13,780	100,595	\$72,261	
Henry Administration Building	3/15/2009	6/2/2009	164,172	2135	\$114,216	81,786	\$49,072	358,223	\$65,144	
Krannert Center for the Performing Arts	11/1/2008	7/1/2009	298,320	1090	\$71,630	39,240	\$23,544	171,871	\$48,086	work done by KCPA staff
Law Building	12/22/2008	1/19/2009	189,729	2539	\$181,432	96,320	\$57,792	421,882	\$123,640	
Library (6th Stack)	11/10/2009	12/11/2009	77,000	379	\$43,171	12,682	\$7,609	55,547	\$35,562	Plus add'l on floors 6.5 & 8, part of rare book project.
Loomis	3/11/2009	4/22/2009	175,511	2001	\$121,339	72,207	\$43,324	316,267	\$78,015	
Madigan Lab	3/15/2009	5/12/2009	171,005	2587	\$151,834	91,640	\$54,984	401,383	\$96,850	
Materials Research Lab	4/2/2009	4/17/2009	131,320	2253	\$104,845	82,334	\$49,400	360,623	\$55,445	
Materials Science Engineering Building	3/2/2009	4/13/2009	100,715	983	\$55,490	35,323	\$21,194	154,715	\$34,296	
Mechanical Engineering Lab	3/2/2009	4/3/2009	151,859	1395	\$75,537	56,129	\$33,677	245,845	\$41,860	
Mumford	3/15/2009	5/18/2009	100,148	1508	\$81,111	54,930	\$32,958	240,593	\$48,153	use 6500K lamps
National Soybean RC*	7/23/2008	8/13/2008	98,853	1481	\$7,973	56,823	\$34,094	248,885	-\$26,120	Not net negative cost as costs included in Psych
Natural History	9/28/2009	2/2/2010	153,285	2153	\$126,919	78,994	\$47,396	345,994	\$79,522	
Noyes	2/15/2010	3/9/2010	184,465	1574	\$65,776	63,074	\$37,844	276,264	\$27,931	
Plant Science	4/23/2009	5/14/2009	95,139	1009	\$81,123	36,343	\$21,806	159,182	\$59,317	
Psych*	7/7/2008	8/13/2008	158,228	2571	\$184,314	89,848	\$53,909	393,534	\$130,405	L.S. project did 1812 add'l fixtures, separately funded
Roger Adams Lab (portion)	3/15/2010	4/15/2010	279,832	64	\$3,322	2,304	\$1,382	10,092	\$1,940	Prorated to meet ICECF '08 grant limit; remainder carried forward to '09
Talbot	3/2/2009	4/3/2009	110,527	1814	\$125,064	75,494	\$45,296	330,664	\$79,767	
Turner*	8/14/2008	9/17/2008	180,001	3799		136,458	\$81,875	597,686	-\$81,875	Not net negative cost as costs included in Psych
Transportation Costs					\$10,568				\$10,568	
<b>Total</b>			<b>4,517,377</b>	<b>52,810</b>	<b>\$2,922,016</b>	<b>1,970,466</b>	<b>\$1,182,280</b>	<b>8,630,641</b>	<b>\$1,739,736</b>	

2-lamp equivalent fixtures

Per-fixture watts reduced from 84 to 48

Watt reductions also include reflector kits & permanent delamping

\*Work for Turner and portions of National Soybean under Psych Construction Cost.

**UNIVERSITY OF ILLINOIS - FACILITIES AND SERVICES  
LIGHTING RETROFITS - ICECF 08 - COST SUMMARY AS OF JUNE 30, 2010**

BLDG_NAME	ACCOUNT	LABOR	STOCK	PURCH MAT	TRANSFER	TOTAL
ADVANCED COMPUTATION BLDG	0340-LTRETRO-C-0017	5,349.30	1,139.75	29,605.68	-	36,094.73
AGRICULTURE ENGR SCI BLDG	0340-LTRETRO-B-0008	2,541.90	1,794.75	24,151.96	65,067.36	93,555.97
ALTGELD	0340-443	28,800.00		11,872.42		40,672.42
ARMORY	0340-LTRETRO-B-0006	3,239.31	3,506.85	104,396.39	-	111,142.55
BECKMAN INSTITUTE	0340-LTRETRO-C-0228	11,656.73	11,839.45	320,853.85	-	344,350.03
BEVIER	0340-LTRETRO-D-0158	63,550.96	3,891.01	26,843.97	-	94,285.94
CHILD DEV, HOME EC	0340-LTRETRO-C-0062	3,301.85	837.67	19,380.88	-	23,520.40
DAVENPORT HALL	0340-LTRETRO-D-0001	63,514.46	4,241.85	30,769.51	-	98,525.82
ENGINEERING SCIENCES BLDG	0340-LTRETRO-A-0174	2,618.56	1,371.95	44,047.53	-	48,038.04
ENGLISH BUILDING	8220-002	2,142.64	1,509.50	44,900.00	-	48,552.14
EVERITT ELECTRICAL AND COMPUTER ENGINEERING	0340-LTRETRO-A-0037	5,608.99	3,783.75	98,655.09	-	108,047.83
FOREIGN LANGUAGES BL	0340-LTRETRO-B-0172	9,329.81	3,228.12	43,181.60	127,786.18	183,525.71
FREER HALL, LOUISE	0340-LTRETRO-D-0064	61,072.61	1,822.25	23,145.89	-	86,040.75
HENRY ADMIN	0340-LTRETRO-B-0046	3,844.25	5,122.11	105,249.48	-	114,215.84
KCPA **	0340-514	1,883.14			69,746.61	71,629.75
LAW BUILDING	0340-LTRETRO-C-0156	8,777.53	4,889.99	167,764.93	-	181,432.45
LIBRARY	0340-LTRETRO-D-0041	25,149.58	1,528.80	15,420.19	1,072.23	43,170.80
LOOMIS LAB	0340-LTRETRO-A-0067	2,696.34	2,844.59	115,779.06	19.00	121,338.99
MADIGAN LAB, EDWARD R.	0340-LTRETRO-B-0336	8,373.33	5,636.60	44,830.03	92,994.17	151,834.13
MAT RES LAB, FREDERICK SEITZ	0340-LTRETRO-A-0066	3,665.68	6,490.02	94,689.73	-	104,845.43
MATERIALS SCIENCE AND ENGINEERING BUILDING	0340-LTRETRO-A-0034	3,687.63	2,156.91	49,645.13	-	55,489.67
MECHANICAL ENGINEERING LAB	0340-LTRETRO-A-0029	3,878.31	2,537.60	69,121.32	-	75,537.23
MUMFORD HALL	0340-LTRETRO-B-0069	2,369.07	2,557.98	76,183.64	-	81,110.69
NATIONAL SOYBEAN RC	0340-476	7,973.36	-	-	-	7,973.36
NATURAL HISTORY BUILDING	0340-LTRETRO-D-0032	5,170.65	3,405.75	32,982.55	85,359.60	126,918.55
NOYES LAB OF CHEM	0340-LTRETRO-D-0012	41,256.86	2,603.70	21,915.17	-	65,775.73
PLANT SCIENCES	0340-LTRETRO-B-0256	2,324.44	2,501.82	21,483.09	54,813.89	81,123.24
PSYCH & TURNER	0340-476	18,255.34	13,302.18	152,756.50	-	184,314.02
ROGER ADAMS LAB ***	0340-LTRETRO-D-0116	74,490.42	4,612.25	34,407.20	-	113,509.87
TALBOT LABORATORY	0340-LTRETRO-A-0013	4,189.95	2,871.60	118,002.26	-	125,063.81
TRANS COST-MULTIPLE BLDGS *	0340-LTRETRO-D-0001	8,691.97	1,475.00	400.95	-	10,567.92
	Grand Total	489,404.97	#####	1,942,436.00	496,859.04	3,032,203.81

Total with pro-rated Roger Adams Lab: 2,922,015.94

- \* REPRESENTS TRANSPORTATION COSTS RELATED TO ALL LIGHTING RETROFIT PROJECTS ACCUMULATED UNDER ONE WORKORDER
- \*\* PER KCPA COST SUMMARY
- \*\*\* SHOWS FULL COST THUS FAR - ONLY A PORTION UNDER FIRST GRANT (\$3,322) - REST WILL BE INCLUDED IN SECOND GRANT

Lighting Retrofits by Building and Fixture Type

Building Name	Installed Fixture Type	Total Quantity
Advanced Computation Building	4F1LT8	4
	4F2LT8	70
	4F3LT8	219
	4F4LT8	60
	2F2LT8U	19
Ag Engineering	4F1LT8	294
	4F2LT8	1,049
	4F4LT8	21
Altgeld Hall	4F1LT8	362
	4F2LT8	450
	4F4LT8	24
	8F2LT8	13
Armory	4F1LT8	69
	4F2LT8	1,443
	4F3LT8	21
	4F4LT8	192
Beckman Institute	4F1LT8	679
	4F2LT8	2,626
	4F3LT8	415
	4F4LT8	877
	2F2LT8	7
	2F3LT8	2
	3F1LT8	74
3F2LT8	123	
Bevier	4F1LT8	68
	4F2LT8	1,355
	4F3LT8	7
	4F4LT8	82
	2F2LT8U	1
Child Development Lab	4F1LT8	9
	4F2LT8	172
	4F4LT8	67
	2F2LT8	6
Davenport	4F1LT8	111
	4F2LT8	1,397
	4F3LT8	62
	4F4LT8	118
	2F1LT8	8
	2F2LT8	3
	2F2LT8U	2
	3F2LT8	6
	3F3LT8	1
	8F2LT8	1
8F4LT8	7	
Engineering Sciences Building	4F1LT8	12
	4F2LT8	481
	4F3LT8	22
	4F4LT8	90
	2F1LT8	4

English Building	4F1LT8	21
	4F2LT8	568
	4F3LT8	16
	4F4LT8	8
	2F2LT8	62
	2F2LT8U	2
Everitt Electrical Engineering Building	4F1LT8	23
	4F2LT8	1,672
	4F3LT8	10
	4F4LT8	155
	2F2LT8	15
Foreign Language	4F2LT8	2,398
	4F4LT8	148
Freer	4F1LT8	99
	4F2LT8	571
	4F3LT8	1
	2F1LT8	4
	2F2LT8	11
Henry Administration Building	4F1LT8	79
	4F2LT8	706
	4F3LT8	239
	4F4LT8	443
	2F1LT8	2
	2F2LT8	71
	3F2LT8	2
Krannert Center for the Performing Arts	8F1LT8	246
	8F1LT8	234
	4F2LT8	360
	4F2LT8	250
Law Building	4F1LT8	1,235
	4F2LT8	700
	4F3LT8	303
	4F4LT8	266
	2F1LT8	56
	2F2LT8	24
	2F3LT8	6
	3F1LT8	7
	3F2LT8	5
	3F4LT8	2
	8F1LT8	161
	8F2LT8	33
	Library (6th Stack)	4F1LT8
4F2LT8		58
8F2LT8		20
Loomis	4F1LT8	3
	4F2LT8	1,983
	4F4LT8	6
Madigan Lab	4F1LT8	30
	4F2LT8	1,982
	4F3LT8	334
	4F4LT8	2
	4F1LT8	8

Materials Research Lab	4F2LT8	2,011
	4F3LT8	88
	4F4LT8	1
	2F2LT8	84
	3F1LT8	2
	4F2LT12	22
Materials Science Engineering Building	4F1LT8	17
	4F2LT8	793
	4F3LT8	58
	4F4LT8	46
	2F2LT8	1
	2F3LT8	45
Mechanical Engineering Lab	3F3LT8	8
	4F1LT8	54
	4F2LT8	929
	4F3LT8	18
	4F4LT8	77
	2F1LT8	2
	2F2LT8	9
	2F4LT8	1
Mumford	8F2LT8	34
	8F4LT8	10
	4F1LT8	252
	4F2LT8	962
	4F3LT8	2
	4F4LT8	202
	2F1LT8	6
	2F2LT8	2
National Soybean Research Center	2F3LT8	3
	2F2LT8U	1
	4F2LT8	258
	4F3LT8	195
Natural History	4F4LT8	431
	2F2LT8	79
	4F1LT8	200
	4F2LT8	1,251
	4F3LT8	70
	4F4LT8	328
Noyes	2F2LT8U	4
	8F2LT8	4
	4F1LT8	12
	4F2LT8	1,227
	4F3LT8	2
	4F4LT8	76
	2F2LT8	5
Plant Science	2F2LT8U	2
	8F2LT8	22
	4F2LT8	642
	4F3LT8	101
	4F4LT8	107
	2F2LT8	5
	4F1LT8	93

Psychology Lab	4F2LT8	2,193
	4F4LT8	103
	2F1LT8	58
	2F2LT8	26
Roger Adams Lab (portion)	4F2LT8 Equivalents	64
Talbot	4F1LT8	10
	4F2LT8	902
	4F3LT8	156
	4F4LT8	213
	2F2LT8	82
	2F4LT8	1
Turner Hall	8F4LT8	18
	4F1LT8	25
	4F2LT8	3,300
	4F3LT8	25
	4F4LT8	239
	2F1LT8	8
	3F4LT8	8

Fixture Code

First number = lamp length

Second number = quantity per fixture

Third number = diameter (1/8's of an inch)

U at the end indicates U-shaped tube

4F3LT8 = Four-footed lamps, three lamps per fixture, 1" diameter





# Welcome Back!

**This room now features  
High-Efficiency Fluorescent Lighting.**

Saves over 40% of energy compared to the old lighting!

Facilities & Services upgraded this room as part of our ongoing campus lighting retrofit program, partially funded by a grant from the Illinois Clean Energy Community Foundation.

## Do your part.

**Turn off the lights  
when you leave  
the room.**



Questions? Comments? Visit our website at  
[www.energymanagement.uiuc.edu](http://www.energymanagement.uiuc.edu)





## Campus Lighting Retrofit

A large scale lighting retrofit project is underway on campus, upgrading older inefficient fluorescent lighting systems with more efficient fluorescent systems. with an estimated savings of more than \$1 million annually.

The Campus Lighting Retrofit Project replaces old, out-dated T12 fluorescent lamps and ballasts with state-of-the-art T8 technology.

The University of Illinois at Urbana-Champaign received a \$1.2 million grant from the Illinois Clean Energy Community Foundation to help fund the project.

### Scope

- Updating over 85,000 campus light fixtures
- Fixtures are spread across 44 buildings
- Estimated 36,000 man hours to complete

### Energy Conservation

- Overhead fixtures consume between 40% and 50% of a building's electricity
- Updating to T8 lamps will make building electricity usage 40% more efficient
- Expected return on the up front investment in materials within three years of the transition

### Additional Benefits

- Reduces the deferred maintenance backlog
- Reduces maintenance because the lamps and ballasts are all brand new
- New high performance T8 lamps do not flicker or hum
- New lamps give off a more natural color rendition
- Provide the same amount of light as the previous T12

### Completed Updates

- Since July, the Campus Lighting Retrofit Project has completed updates in the following buildings:
  - Turner Hall
  - Psychology Building
  - English Building
  - National Soybean Research Lab
  - Law Building
  - Altgeld Hall
  - Advanced Computation Building (ACB)
  - Child Development Lab (CDL)
  - Beckman Institute

### Contacts

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217-333-2271  
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Customer Relations & Communications  
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## Campus ahead of goals in reducing energy consumption

By Sharita Forrest  
Assistant Editor

The Urbana campus is ahead of schedule in meeting Chancellor Richard Herman's goal of reducing energy consumption by 10 percent by Fiscal Year 2010.

For the first 10 months of the current fiscal year (FY09), energy consumption was down by 9.6 percent over last fiscal year. As a result, the campus expects to save about \$5 million in energy costs.

Initiatives such as the Energy Liaison Program that heighten awareness about energy usage and promote personal responsibility for containing costs and reducing consumption, and lighting and building system retrocommissioning programs – along with decreases in natural gas prices – have contributed to a better bottom line.

"We're heading toward a 10 percent reduction this year, and I don't think we could have done that without the campus units getting on board," said Terry Ruprecht, director of energy conservation at Facilities and Services. "Folks out there are doing whatever small things they can do. It really is one of those nifty things where a whole bunch of people are putting their shoulders to the wheel and making it work."

The savings will be used to pay down the multimillion-dollar deficit that the campus accrued over the past several years as energy costs soared. The second priority will be funding conservation initiatives.

Crews from F&S are almost finished with the first phase of the Lighting Retrofit Project,

which entails replacing more than 80,000 outdated fixtures and ballasts in the 44 buildings that use the most energy. About two dozen buildings were retrofitted during the project's first phase, and nine more buildings – including Chemistry Annex, Roger Adams Lab, Freer Hall and the Medical Sciences building – will be retrofitted during the second phase, which is expected to begin July 1 and run through December.

The \$4.2 million project was funded in part by a \$1.2 million grant from the Illinois Clean Energy Community Foundation and by the Academic Facilities Maintenance Fund Assessment paid by students. The campus has applied for additional funding of \$800,000 from the Illinois Clean Energy Community Foundation. When completed, the Lighting Retrofit project is expected to save about \$1 million – or 12.8 million kilowatt hours – annually, based on 12-hour days.

During the summer, 250 occupancy sensors, which turn off lights when rooms are unoccupied for 30 minutes, are being installed in many classrooms. The sensors can reduce electricity usage by 30-50 percent, but they are costly to install in expansive rooms that have multiple circuits and switches, so "you have to be fairly judicious about where you decide to put them," Ruprecht said.

Thus far, sensors have been installed in classrooms in the Foreign Languages Building, Loomis Lab and the Armory, and seven more buildings are slated to receive them.

"We're focusing on class-



photo by L. Brian Stauffer

**What's watt** Terry Ruprecht, director of energy conservation at Facilities and Services, is shown with a power meter. Replacing outdated building systems with more energy efficient equipment and promoting personal and unit-level responsibility for conservation helped reduce energy consumption on campus by more than 9 percent during the first 10 months of the current fiscal year, and is expected to save about \$5 million in energy costs.

rooms for right now because the \$50,000 for the project came from the Student Sustainability Committee, and they really wanted to focus on the buildings where students would be most affected," said Eva Sweeney, F&S engineering specialist. "It's a pretty modest start, but we're hoping that if the project is successful we'll be able to go much more widespread with it." However, additional funding will need to be found in order to do that, Sweeney said.

A portion of the project costs will be refunded to the campus

through a rebate program administered by the Illinois Department of Commerce and Economic Opportunity.

F&S is continuing its Retrocommissioning Project, replacing and repairing HVAC and other building systems to improve energy efficiency. Programmable controls and occupancy sensors have been installed in older buildings such as Krannert Center for the Performing Arts, or "tweaked" in newer buildings that already had the controls, to conserve energy during all hours of operation. Since the Ret-

rocommissioning Project began, work in 12 buildings – including the National Soybean Research Center, Turner Hall and the ACES Library – has been completed or is under way, reducing energy costs by an average of 27 percent per building. The improvements are expected to save about \$1.8 million annually.

The number of service requests being made to the Temperature Control Shop regarding complaints about areas being too hot or too cold – as well as the num-

SEE ENERGY, PAGE 7

## Units implement conservation programs to use less energy

By Sharita Forrest  
Assistant Editor

Faculty and staff members at the Urbana campus are pursuing a variety of eco-friendly initiatives aimed at protecting the environment and helping the campus pare its utility bills.

The Green Team, a committee comprising unit managers and eco-friendly volunteers at McKinley Health Center, has decided to match Chancellor Richard Herman's goal for the campus by striving to reduce

the health center's energy usage by 10 percent within three years.

To do that, staff members are being encouraged to reduce their use of personal appliances (such as fans or coffeemakers in offices), which are plugged into a Kill A Watt Electricity Usage Monitor that measures their energy consumption and then labeled. The subcommittee that is exploring personal appliance usage is considering establishing a personal use standard for energy consumption and conferring a green seal

of approval to employees who meet it. Two other subcommittees are addressing recycling and education and marketing issues.

A large source of energy consumption is the more than 300 desktop computers in the building, said Jan Phillips, assistant director of health information and systems at McKinley. For the past year, 40 exam rooms have been equipped with energy-conserving thin clients, paperback-book-sized computers that consume just five or 11 watts of power versus the 61 watts that standard desktop computers consume.

To conserve water, in March plumbers replaced the 1.5-gallon-per-minute aerators in 16 hand-washing sinks with aerators that dispense only one-third as much, and a water-conserving toilet, urinal and sink also were installed in one restroom on a trial basis in April, said Glen Filkin, building service supervisor.

The College of Veterinary Medicine has a similar group of volunteer environmentalists known as the Orange, Blue and Green Committee, which formed about two years ago at the suggestion of Mark Mitchell, section head of small animal medicine.

One of the committee's early projects involved behavior modification for able-bodied students who chose to ignore the signage and enter the vestibule of the Veterinary Medicine Basic Sciences Building through the automatic doors rather than the manual doors, which let in less outside air and help regulate the building's temperature. Committee members stationed themselves in the vestibule and gave snacks to people who entered the building through the correct door.

"This past winter, we didn't do that, and we had a new crop of 120 first-year students," and the problem recurred, said Joe Kunkel, director of facilities at the Basic Sciences Building and chair of the commit-

tee. "Next year, we're going to set up a table and do some positive reinforcement. It gets people's attention."

With a \$22,000 grant from the Student Sustainability Committee – and the help of volunteers from the local Grand Prairie Friends conservation organization, the Illinois Natural History Survey and the broader community – the committee planted a 10,000-square-foot native prairie garden at the Basic Sciences Building. The garden reduces mowing, fosters a natural habitat for native insects and animals, and serves as an educational tool. Kunkel said the rest of the lawns will be "no mow" zones.

"It can look nice without all this mowing and maintenance, and that's our goal," Kunkel said.

Mitchell and Dianna Black, a staff pharmacist, coordinated a recycling program for non-biologically contaminated medical plastics, such as syringe cases. The clinic produces about three to four large garbage bags of such waste a week, Mitchell said. Additionally, Black is exploring a safe-disposal program for waste pharmaceuticals.

To conserve energy, the Large Animal Clinic plans to close one of its four wards for the majority of the summer. In each ward, enough outside air is taken in, cooled, circulated and expelled to replace all the air in an average-sized home once every minute, Kunkel said.

However, certain animals – such as those owned by clients and animals used for research and teaching purposes – can't be stabled together, so coordinating the closure can be complicated.

"It was estimated that if we can do this, we have the potential to save \$50,000 in energy costs, so it's significant," Kunkel said. "We're going to tweak it as we go along, but everybody's focused on 'if you're not using it, turn it off.'" ♦



photo by Kerry Helms

**Giving garden** Suhail Barot, a graduate student in electrical and computer engineering and chair of the Student Sustainability Committee, removes a prairie grass seedling from a flat in preparation for planting. The committee funded the purchase of the seedlings for the installation of a sustainable prairie garden at the Veterinary Medicine Basic Sciences Building. On June 6, volunteers from campus and the community planted the seedlings, which will provide a habitat for native insect and vertebrate species and a teaching tool on prairie flora.

## Chancellor Herman: Cutting energy usage 'right thing to do'

The UI's Urbana campus has established a goal of reducing the energy consumption of existing buildings by 10 percent over the next three years and has established a five-year target of rolling back usage to 1990 standards, consistent with the Kyoto Protocol.

The reduction is expected to save the equivalent of 300 million kilowatt-hours of energy; it would be achieved by controlling growth, developing incentives to reduce usage, encouraging the campus community to be more energy conscious and stimulating investment in energy-saving measures.

"This is part of a broader initiative in sustainability that is consistent with our role in educating the next generation of leaders," said Chancellor Richard Herman. "Reducing our carbon footprint is the right thing to do. This initiative will allow us to continue down

the path to sustainability, and it will allow us to invest our scarce resources on our mission critical activities of teaching, research and public engagement."

Last month, campus Facilities and Services staff began changes such as nighttime shutdowns of heating, ventilating and air-conditioning (HVAC) systems and changes in air- and water-temperature settings in most buildings. The emphasis will be on reduced running times of most motor-driven equipment and eliminating historic wasteful practices such as not reducing the speed on an HVAC system during low-occupancy evening hours.

Longer-term changes include continued lighting upgrades in current buildings and aggressive renovation and replacement of inefficient HVAC systems.

Campus energy costs and usage are now increasing at a non-

sustainable rate.

"If the University of Illinois is to maintain its status as one of the nation's best public research universities, we must demonstrate the same type of leadership in sustainability that we have shown elsewhere," Herman said.

In addition to the pledge to reduce carbon emissions and save money, the Urbana campus is conducting research aimed at identifying alternative renewable fuel sources, directing all colleges to create sustainability plans and building a campus culture that values conservation efforts.

Since 2006, the campus has been committed to constructing all buildings to LEED silver standards and purchasing EnergyStar compliant equipment. In February, Herman joined other university leaders by signing the American College & University Presidents Climate Commitment. ♦

## UI receives \$4 million in energy grants

UI Board of Trustees Chairman Lawrence C. Eppley announced May 22 that the Urbana campus has received three grants totaling \$4.025 million from the Illinois Clean Energy Community Foundation.

It was also announced at the meeting that sustainability offices will be established on the Urbana, Chicago and Springfield campuses to coordinate administration and student efforts to encourage energy conservation, promote environmentally friendly practices and integrate green thinking into the campuses' curricula, research and extracurricular activities.

The energy foundation grants will provide \$1.2 million for lighting upgrades; \$2 million for a wind turbine project and \$825,000 for a bioenergy research project.

Chancellor Richard Herman said the grants are appropriate to the needs and character of the Urbana campus.

"The Illinois Clean Energy Community Foundation grants will advance our efforts to implement cutting-edge energy conservation solutions," Herman said. "The impact of this partnership will benefit the

campus, the community and the people of Illinois."

UI President B. Joseph White said the grants will be put to good use and fit in well with the university system's energy policy and the continuing work of the three campuses' energy task forces.

"These grants continue a history of the clean energy foundation's assistance to the university in becoming more energy efficient and creating the energy solutions of the future," White said. "The budgetary efficiencies these grants provide will allow us to apply more funds - every semester - on our academic front lines in support of our students and professors.

"Longer term, the grants' research components will help us progress to our goal of campus sustainability and do the research to provide new, clean technologies to the marketplace," White said.

The Illinois Clean Energy Community Foundation was founded in 1999 as an independent foundation with a \$225 million endowment from funds provided by Commonwealth Edison. The foundation awards grants to fund energy-conservation research projects. SEE ENERGY GRANT, PAGE 5

## UI study: Public schools as good as private in raising math scores

By Craig Chamberlain  
News Bureau Staff Writer

Students in public schools learn as much or more math between kindergarten and fifth grade as similar students in private schools, according to a new UI study of multi-year, longitudinal data on nearly 10,000 students.

The results of the study appeared in the May issue of the influential education journal Phi Delta Kappan.

"These data provide strong, longitudinal evidence that public schools are at least as effective as private schools in boosting student achievement," according to the authors, education professor Christopher Lubienski, doctoral student Corinna Crane and education professor Sarah Theule Lubienski.

The new study is the first published study to show that public schools are at least as effective as private schools at promoting student learning over time, they say.

Combined with other, yet-unpublished studies of the same data, which produced similar findings, "we think this effectively ends the debate about whether private schools are more effective than publics," said Christopher Lubienski, whose research has dealt with all aspects of alternative education.

This is important, he said, because many current reforms, such as No Child Left Behind, charter schools and vouchers for private schools, are based on that assumption.

In a 2005 study, the Lubienskis found that public school students tested higher in math than their private school peers from similar social and economic backgrounds.

In another, more-extensive study in early SEE MATH SCORES, PAGE 4

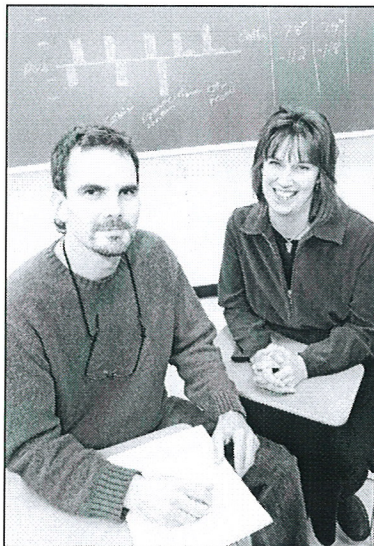


photo by L. Brian Stauffer

**Student achievement** Illinois education professors Christopher and Sarah Lubienski have completed another study comparing math education in public schools and private schools. "It is worth noting," the husband-and-wife researchers write in analyzing their results, "how little variation school type really accounts for in students' growth in achievement."

## Big changes loom if high gas prices hold

By Jan Dennis  
News Bureau Staff Writer

Americans' usual fuel-saving shortcuts could give way to dramatic changes affecting the nation's auto, housing and even job markets if gasoline prices stay at record highs nearing an average \$4 a gallon nationwide, a UI economic expert says.

"For most of us, we're not going to change anything fundamental right away," said Don Fullerton, a finance professor and former deputy assistant secretary of the U.S. Treasury Department. "We may cut out a few discretionary trips or shift household spending and just pay for the gas for a while."

But if historic pump prices hold, cash-strapped motorists will likely begin making broader changes that could potentially reshape lifestyles and buying hab-

its, said Fullerton, a leading researcher on the economic impact of environmental regulations such as gasoline taxes and pollution mandates.

He says lingering high prices could hasten a shift from gas-guzzling trucks and sport-utility vehicles to hybrids and smaller, more fuel-efficient cars - "good for automakers like Toyota and Honda, but not so good for Ford and some other U.S. automakers that rely on SUVs and trucks."

Ultimately, the nation could see a migration back to cities and away from suburbs as Americans try to balance fuel costs that are rising far more sharply than their paychecks, Fullerton said.

"It hasn't been unusual for people to live miles from where they worked because they liked the house when they bought it or SEE GAS PRICES, PAGE 8

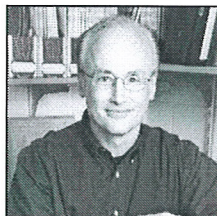
In This Issue



### Working safely

A safety program in Facilities and Services is now available to all campus units. The principles are applicable to every worker, whether the job consists of strenuous physical labor or working in an office.

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### Tough bug

Researchers have discovered how an *H. pylori* toxin gets into cells, a feat that helps the bacterium survive.

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### On the Web

[www.news.uiuc.edu/ii](http://www.news.uiuc.edu/ii)

## brief notes

### Explore the world through sports and games

#### Youth summer camp is July 23-25

To help celebrate the upcoming Summer Olympics, Illinois 4-H, along with the UI area studies centers, is sponsoring a youth summer camp offering a "Passport to the World." The camp - for youth ages 12-14 - will be held at 4-H Memorial Camp near Monticello from July 23 to 25. The goal of the camp is to increase knowledge of sports and games from countries and regions around the world.

Participants will:

- Meet and visit with Erik Henriksen, member of the 1980, 1984 and 1988 U.S. Olympic teams and bronze medalist in sprints, 500m and 100m.
- Participate with fellow teammates in an Olympic/World Sports Challenge.
- Participate in sports and games popular in Brazil, China, Europe, Japan, Russia and West Africa.
- Learn new games and recreational activities.

Registration is open to the first 75 participants who register by June 30. Participants do not need to be 4-H members or residents of Illinois. The \$75 registration fee includes meals, lodging, insurance, T-shirt and program fees. To register or get more information, go to [www.4-h.uiuc.edu/opp/camping.html](http://www.4-h.uiuc.edu/opp/camping.html) or contact Dorothy Horsch, [dhorsch@illinois.edu](mailto:dhorsch@illinois.edu).

### Printers Row

#### UI units to share exhibit at literary event

Four publishing-related units located at the UI's Urbana campus, and the UI Alumni Association, will collaborate on an exhibit at the 2008 Chicago Tribune Printers Row Book Fair at Dearborn and Polk streets in Chicago. The UI

### Summer Piano Institute

#### Master piano instruction, public concerts featured June 17-21

"From somewhat modest beginnings last year, the institute has attracted more applicants than can be accommodated," said Edward Rath, associate director of the UI School of Music. "The word is out that this is indeed a good opportunity to study with great teachers and hear great performances, as well as meet fellow keyboard players from a variety of home and university territories."



Ian Hobson

Originally conceived by UI Swamund Professor of Piano Ian Hobson, the institute is expected to attract about 30 pianists from throughout the United States and abroad. Participants will gather for daily piano lessons, master classes and recitals.

Student participants will present recitals, free and open to the public, at 5 p.m. June 19-21 in the Memorial Room of Smith Hall.

Institute faculty and guest artists will perform public concerts nightly at 7:30 in the Foellinger Great Hall, Krannert Center for the Performing Arts.



Richard and John Contiguglia



William Heiles



James Tocco

Again this year, the Adams Foundation is sponsoring appearances by New York-based duo-pianists Richard and John Contiguglia; James Tocco, professor of piano and chamber music, University of Cincinnati Conservatory of Music; and Hobson. Rounding out the roster of performers/teachers/clinicians at this year's institute will be School of Music faculty members Timothy Ehlen and William Heiles.

Tickets may be purchased for individual concerts; reduced-price series tickets also are available. ♦

### ON THE WEB

■ **Illinois Piano Institute**  
[www.krannertcenter.com](http://www.krannertcenter.com)

Library, UI Press, the Illini Union Bookstore, Dalkey Archive Press and the Alumni Association will gather under one tent from 10 a.m.-6 p.m. June 7-8, to display and sell recent books, host author signings, and promote UI unity

and scholarship.

The book fair is considered the largest free outdoor literary event in the Midwest, drawing more than 100,000 book lovers.

"Printer's Row is such a great venue to meet people who care about books - from authors, publishing people and librarians, to the folks who read and buy them," said Joan Catapano, associate director and editor-in-chief at the UI Press. "The author panels are stimulating, and the exchanges between writer and reader are refreshing and interesting."

In previous years, the University Library and University Press have shared half of a tent, increasing traffic and sales each year. This year they are joined for the first time by the Illini Union Bookstore, Dalkey Archive Press and the Alumni Association.

The UI Press, which will feature an array of titles from its 90-year history, and Dalkey Archive Press, a renowned translations publisher that has been in business for 23 years and affiliated with the university for just over one year, will sponsor the Printers Row panel "Translating the World: Illinois as a Center of International Publishing." The panel: UI Press director Willis Regier, Dalkey Archive Press founder and publisher John O'Brien, Andrew Wachtel of Northwestern University Press, and moderator Patrick Reardon of the Chicago Tribune.

The exhibit also will host author book signings including Chicago authors, UI faculty authors and nationally known writers. For more information and a full schedule, go to [printersrowbookfair.org](http://printersrowbookfair.org). ♦

### Aug. 29-Sept. 1

#### Music barn festival expands with more concerts, range of music

After a successful inaugural event in 2007, the UI School of Music is augmenting this year's Allerton Music Barn Festival performance schedule with two additional concerts. The Labor Day weekend festival, with a line-up ranging from jazz to classical to klezmer, will take place Aug. 29 through Sept. 1 in a refurbished Dutch hay barn on the southeast edge of the UI's Allerton Park and Retreat Center near Monticello, Ill.

Plans for jamming in two extra concerts are right on track with music school director Karl Kramer's initial vision of how he hopes the festival will evolve.

"Our plan all along has been to start out small, with the idea of growing the festival slowly in the first few years before eventually adding a 4,000- to 5,000-seat arena and an educational component," Kramer said.

"Last year's festival was a big hit. Our five-concert lineup was completely sold out, so that was a clear message that our audience is responding to what we're offering."

Once again this year, music lovers will be able to satiate their appetites for superb music and food. A major difference this year is that concert tickets and food may be purchased separately. A bistro-style menu and beverage service, provided by K-Spear Culinary Arts, Monticello, will be available prior to each performance. In addition, on Friday and

Saturday, festival-goers will have the option of ordering from a fixed-price menu, with wine pairings, offered at Montgomery's restaurant before the evening concerts. Reservations are required and may be made by calling 217-762-3733.

Also new this year will be improvements to the concert space, made possible through regional foundation grants. Upgrades include life-safety enhancements and the installation of new lighting and a recording-quality surround-sound



Pacifica Quartet performs Aug. 30 and Aug. 31 at the Music Barn.

system.

Kramer said all of this year's festival performances will be recorded. The performances will be available for streaming from the School of Music's Media Center Web site, which is expected to go live at the end of August. It will be accessible through the school's main site, [www.music.uiuc.edu](http://www.music.uiuc.edu).

"The people and merchants of Monticello have really embraced the festival and we're all looking forward to another successful weekend," Kramer said.

Tickets for individual festival performances are on sale now at the Krannert Center for the Performing Arts ticket office, 217-333-6280, or through its Web site, [www.krannertcenter.com](http://www.krannertcenter.com). Prices for individual concerts are \$26 for adults; \$20 for students and senior citizens. Weekend passes are available for \$154 for adults; \$105 for students and seniors. ♦

### ALLERTON MUSIC BARN FESTIVAL

#### Aug. 29:

8:30 p.m. - "Beyond Cool," will show off the talent of the UI music school's world-class jazz faculty.

#### Aug. 30:

10:30 a.m. - "Bach Unaccompanied," UI music faculty members Stefan Milenkovich, violin; Ani Aznavoorian, cello; and Charlotte Mattax, harpsichord.

8:30 p.m. - "Eine Nacht in Wien," featuring Pacifica, the UI's quartet in residence, with Ian Hobson, piano.

Reception to follow concert at the Music Barn, sponsored by Montgomery's restaurant.

#### Aug. 31

10:30 a.m. - "Bach Cantatas," Allerton Bach Choir and soloists with the Allerton Festival Orchestra conducted by UI music professor Fred Stoltzfus. The Rev. Roger Digges will deliver an ecumenical homily.

8:30 p.m. The Pacifica Quartet returns for a program featuring compositions by Beethoven, Mendelssohn and Prokofiev.

#### Sept. 1

10:30 a.m. - "The Virtuoso Bandonéon," featuring Peter Soave on the bandoneón - an accordion-like instrument indigenous to Argentina, with buttons instead of keys. Highlights will include reconstructions of tangos by Astor Piazzolla.

8:30 p.m. - "Vereteki Pass." This klezmer ensemble will perform dances from Moldavia and Bessarabia; Jewish melodies from Poland and Rumania; Hutzul wedding music from Carpathian-Ruthenia; and Rebetic aires from Smyrna, interwoven with original compositions.

### ON THE WEB

■ **Allerton Music Barn Festival**  
[www.allertonmusicbarn.com](http://www.allertonmusicbarn.com)

### ENERGY GRANT, CONTINUED FROM PAGE 1

ing and money-saving facility improvements for local governments, non-profit organizations, schools and universities.

Eppley gave UI students credit for promoting energy efficiency and clean technologies on campus.

"The students on the Urbana campus have voted to have an energy-technologies fee to support alternative-energy production," Eppley said. "Their concerns and idealism dovetail well with the administration and trustees' efforts to control energy costs and set an environmental example for the state."

"The clean energy foundation's grants enable us to work together on all aspects of our campus energy challenges - cost effectiveness, reduction of emissions and clean-energy research," Eppley said. Funds from the student-approved alternative-technology fee will contribute \$300,000 to the wind turbine project, which will both replace conventionally produced electric power on campus and be used in research endeavors on optimum turbine placement, wind velocity, electrical generation and other data.

The university will contribute \$560,000 in matching funds to the biomass research project. It will investigate generating heat and electricity by burning perennial grasses such as Miscanthus and crop wastes.

White said the sustainability offices will be in place on each campus by fall semester to coordinate both university and student organizations' efforts at improving energy efficiency and conservation, acquisition of more environmentally friendly products and foods, the reuse and recycling of wastes, and the adoption of ecological practices that lower carbon emissions. ♦

## UI recycles 48.8 percent of campus waste, exceeding goal

By Sharita Forrest  
Assistant Editor

**T**wenty-one tons of plastic, 41 tons of aluminum, 625 tons of scrap metal, 838 tons of cardboard and 1,236 tons of paper.

Those were the staggering amounts of waste materials recycled by Facilities and Services' Waste Transfer Station last year. During 2007, the transfer station diverted 48.8 percent of the campus's waste stream from landfills – exceeding the state-mandated goal of recycling at least 40 percent of its waste – and saved more than \$200,000 in landfill costs.

The campus began its recycling program in 1989. "Since then, we have invested heavily in campuswide waste-management activities, including a \$1.3 million material processing addition to the Waste Transfer Station," said Tim Hoss, coordinator of campus waste management.

The UI was one of the first universities to create a state-of-the-art recycling-sorting facility when it opened the Material Recovery Facility in 1997. "The new addition is a huge factor in reducing the environmental footprint of the campus," Hoss said.

Two trucks from the transfer station collect waste paper daily, and another truck collects cardboard twice daily from the thousands of recycling bins and 250 Dumpsters around campus. At the recovery facility, trucks dump trash onto the tipping floor, where bulky items such as large cardboard boxes, equipment and non-recyclable materials are removed. Workers then use a loader to push the trash piles onto a conveyor belt, which moves the trash into the main building where workers sort it, remove additional recyclable materials and drop them through chutes into storage bunkers. Six workers from the Developmental Services Center in Champaign help with the sorting.

The recyclable materials in the bins are then pushed onto another conveyor for baling. The transfer station, which generated about \$500,000 in revenue during Fiscal Year 2008, is designed to be self-supporting. Compressing recyclable materials such as paper, cardboard, aluminum and plastic bottles into large bales yields a higher mar-



photo by L. Brian Stauffer

**All bottled up** Tim Hoss, coordinator of campus waste management, stands beside a stack of plastic containers that have been compressed into a bale in preparation for shipment to a recycling mill. During 2007, the campus Waste Transfer Station recycled 21 tons of plastic in addition to paper, aluminum, scrap metal and cardboard, saving more than \$200,000 in landfill costs. By state mandate, the UI must recycle at least 40 percent of its waste.

ket price. The recyclables collected each day are baled the same day. Trailer loads – weighing a minimum of 42,000 pounds – are sold and shipped directly to mills.

Across campus, many other F&S units are reclaiming, reusing and recycling various resources. Although the Printing Department has offered clients the option of having their course packs printed on recycled paper for several years, this year Printing implemented a policy that recycled paper would be the standard material unless clients requested new paper.

"A department or professor can choose not to use recycled, but none have done so at this point," said Duane Fitch, duplicating services manager. "We currently do around 200 packets per year. We use a little more than 4,000 pounds per year of recycled stock for course packs alone."

The reason for implementing the policy was because "95 percent of course packs have the same specifications – white with black ink," Fitch said. "Although quality is always critical, minor flaws in the stock such as spots or flecks are more acceptable since it is a third- or fourth-generation print."

From January through June, 40 percent of the paper that the Printing Department used was recycled stock. Printing also recycles the equivalent of one Dumpster of paper each day, a Dumpster of cardboard per week and a truckload of wood pallets every 10-25 days. Additionally, the department reuses paper, envelope boxes and supply cartons for customer orders.

A not-so-obvious resource that F&S is recycling as well is the heated air from buildings' exhaust. Energy recovery wheels position the air intake and exhaust equip-

ment in close proximity so that the heat from the exhaust transfers to the incoming air, elevating its temperature and reducing the need to heat it.

Last year, the campus established a goal of achieving a silver rating from the Leadership in Energy and Environmental Design Green Building Rating System on all construction or remodeling projects of \$5 million or more. To achieve two of the 33 points required for a silver rating on the Ikenberry Dining Hall project under construction, crews are recycling 75 percent of all construction materials – such as paper, metal, cardboard and wood pallets – based on weight. Additionally, 77 percent of the materials from the demolition of the Illini Orange building previously on the site along Gregory Drive were recycled too.

The Mill Shop at F&S has integrated sustainable and recycled products into its stock for use in renovations and construction projects. The Mill Shop used Trex, a trademarked material composed of recycled plastic grocery bags, pallet wrap and waste wood, to build benches at Pennsylvania Avenue Residence Halls.

Nearly 100 percent of all fluorescent bulbs on campus are recycled by the Labor Electricians Shop, which has operated the program since 2000.

The Maintenance Electrical Repair Shop extracts copper wiring for recycling by a local facility.

Through the Rechargeable Battery Recycling Corp.'s Call2Recycle program, F&S recycles nickel cadmium and lithium rechargeable batteries from power tools and cell phones, and now collects them over the Campus Stores' and Receiving service counter at 1609 S. Oak St.

"Recycling saves material resources, reduces energy consumption and is an integral component to sustainability," said Tom Abram, sustainability coordinator for F&S. "All areas of F&S have been working toward improving our recycling efforts to help our campus and community be as sustainable as possible. Individuals can do their part by reducing, reusing and recycling materials on campus and in their homes." ♦

## Initiative brightens buildings and curbs energy usage

By Sharita Forrest  
Assistant Editor

"Who turned on all the lights?" Bruce Barnham, interim head and a professor of natural resources and environmental sciences, said jokingly about recent lighting improvements at Turner Hall.

Turner Hall is one of four buildings where lighting was upgraded as part of the Lighting Retrofit Project, an ongoing initiative that is expected to curb energy usage while brightening up the lighting and whittling down the backlog of deferred maintenance projects in buildings around campus.

Crews from Facilities and Services Division are replacing fluorescent lamps and ballasts in about 80,000 light fixtures in 44 buildings across campus. T12 fluorescent lamps and magnetic ballasts are being replaced with high-performance T8 lamps and electronic ballasts, which generate the same amount of light but are 40 percent more energy efficient, do not flicker or hum and provide more natural color rendition.

"Other benefits of the T8 lamps are that they reduce the presence of potentially hazardous materials" such as polychlorinated biphenyls (PCBs) and mercury that may be in the old lamps and ballasts, said Eva Sweeney, F&S engineering specialist. "They also reduce the amount of electromagnetic noise generated by the old ballasts," which interfered with research in some units.

Overhead lighting consumes as much as 40-50 percent of a building's electricity. "The chancellor's Strategic Plan includes an aggressive energy reduction goal, and lighting will be an important step toward meet-

ing it," Sweeney said.

Since July, Turner Hall, the Psychology Building, the English Building and the National Soybean Research Center have been retrofitted with new lighting and work is in progress at Krannert Center for the Performing Arts.

"I think a number of the ballasts weren't working efficiently, so perhaps only two-thirds of the fixtures were fully functioning. (The retrofits) really brightened up the building considerably," Barnham said. "It's nice to see the university investing in some of these projects that need done. We've had a lot of these things that were installed when the buildings were built and have never been updated or modernized, and it's good that we're getting some progress made on these fronts. The biggest way that we're going to save energy is to go through the buildings that we have and figure out how we can make them better."

The total project budget is \$2.8 million, and a \$1.2 million grant from the nonprofit agency the Illinois Clean Energy Community Foundation is funding work on about 30 of the 44 buildings on the target list of the largest energy users on campus.

Administration may obtain another \$1.6 million, possibly from the Academic Facilities Maintenance Fund Assessment fee paid by students, to retrofit 10 other buildings on the list, including Davenport Hall, Freer Hall and Bevier Hall. The proposed work would include replacing some deteriorating fixtures and installing occupancy sensors in addition to replacing T-12 lamps and ballasts with energy-efficient T-8s. Projected

**"We can all have a huge impact on energy use by remembering to turn lights off when we leave, even if it is just over lunch or while at a meeting ..."**

—Eva Sweeney

annual energy savings for the 10 buildings would be about \$260,000, based upon 12 hours' usage daily, according to Doris Reser, capital maintenance planning coordinator in F&S.

When completed in May 2009, the Lighting Retrofit Project is expected to save the campus more than \$1 million annually in energy costs.

"The absolute most-efficient light is one that is switched off," Sweeney said. "We can all have a huge impact on energy use by remembering to turn lights off when we leave, even if it is just over lunch or while at a meeting, but especially at the end of the day."

F&S also is moving ahead with retro commissioning projects that will help buildings operate more efficiently by restoring building systems to optimal operating conditions with a focus on energy conservation, emission reduction, lower utility costs and comfort satisfaction. The projects include upgrades and renovations to heating, ventilation and air conditioning systems as well as other building systems.

During the past year, the retro commissioning team has completed upgrades in the ACES Library, Newmark Civil Engineering Building, Krannert Center for the Performing Arts, the National Soybean Research Center and Turner Hall, with estimated sav-

ings to the university of more than \$875,000 annually.

F&S plans to spend about two-thirds of its funding for deferred maintenance projects on energy conservation projects, including classroom renovations and heating, ventilation and air conditioning system replacements. F&S continues to investigate ways to reduce campus energy consumption and the carbon footprint, including the adoption of Leadership in Energy and Environmental Design standards on large building projects, a wind turbine project and an awareness campaign.

Earlier this year, Chancellor Richard Herman established goals of reducing the energy consumption of existing buildings by 10 percent over the next three years and rolling back usage to 1990 standards within five years. In February, Herman pledged that the campus would achieve climate neutrality by joining more than 4,000 institutions in signing the American College and University Presidents Climate Commitment. Additionally, Herman and Provost Linda Kateli approved the Energy Policy for the Urbana Campus in mid-2007, which aims to aggressively reduce energy consumption and costs, diminish greenhouse gas emissions and shift energy generation to renewable resources. ♦

# Illinois Sustainable Technology Center - University of Illinois

## ISTC Sustainability Seminar Series



### Seeing the Light: Campus Lighting Retrofits at UIUC

Eva Sweeney, Facilities and Services  
Dept., UIUC.

December 2, 2008

[Watch the high-quality version of this presentation in Windows Media.](#)

Download slides in [PDF](#) or [PowerPoint](#)

The presentation will focus on fluorescent lighting retrofits as a major component of UIUC's sustainability strategies. Ms. Sweeney will begin with

an introduction to sustainability goals here at UIUC; why UIUC is choosing to undertake retrofits vs. total replacement; and various technical considerations and some of the lessons learned, from a facility management / project engineer point of view. As this project is under a grant from the Illinois Clean Energy Community Foundation (ICECF), information on that grant process will also be shared. However, all the material will be equally applicable to attendees interested in the Department of Commerce and Economic Opportunity (DCEO) or other incentive programs for fluorescent retrofits. The seminar will be broadcast live on the ISTC website [www.istc.illinois.edu](http://www.istc.illinois.edu) and archived there for later viewing.

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