

2013 Efficiency Forum – Project Team Breakout II Market Solutions

"Successful Strategies for Engaging Tenants to Improve Energy Efficiency"





Introducing Our Panelists

Deborah Cloutier



Principal

JDM Associates

Eric Duchon

Manger, Sustainaiblity Strategies - Corporate Occupier and Investor Services

Cushman & Wakefield

Clayton Ulrich



Senior Vice President, **Engineering Services**

Hines

Mike Zatz



Chief, Market Sectors Group - ENERGY STAR Commercial and Industrial Branch

U.S. EPA



Changing Behavior

THE BOMA SEATTLE | KING COUNTY

K I L Ø W A T T CRACKDOWN



Prudential Real Estate Investors

Sustainable Standard Operating Guidelines Fall 2009











Bring Your

GREEN TO WORK

with ENERGY STAR

Hines Occupant Engagement



GREEN OFFICE

Tenant Program





Internal Program

Why?

- ✓ Opportunity to lead by example
- ✓ Employees were asking for it
- ✓ Advance Hines' sustainability platform to
 - Investors
 - Owners
 - Clients
 - Tenants
- ✓ Use Hines office as example
- ✓ Demonstrate Hines's commitment

HinesGO

HinesGO® was rolled out in December 2008 to all Hines property, project, development and regional offices.





Internal Program

Evaluation Categories

- ✓ Base Evaluation
 - Energy Efficiency
 - People and Atmosphere
 - Travel and Commuting
 - Reduce, Reuse, Recycle
 - Cleaning and Pest Control
- **✓** Bonus Point Opportunity
 - Remodeling and Construction
 - LEED and Energy Star

Possible Base Points 100 Required Minimum 70 Possible Bonus Points 28









Version 2008.01



Internal Program Scorecard

ASK THE "GREEN" QUESTIONS BEFORE TAKING ACTION.

Develop and establish relationships with vendors/contractors that have sustainable products and missions. When ordering products/supplies ask about the products' environmental impact; ask if there is an alternate product with less impact to the environment.



			I		
SUSTAINABLE GOAL	LEAF CREDITS	GREEN OPPORTUNITIES	UPFRONT COST	LIFE CYCLE SAVINGS	ACHIEVED GREEN
Energy Efficiency A	3	Install occupancy light sensors in private offices, conference rooms, restrooms, and copy rooms to automatically turn off lights when the room is not in use.	Y	Υ	
В	1	Turn off your computer, printer, monitor and task lights when you leave the office.		Υ	
С	1	Set computers to energy saving modes to reduce energy wasted when not in use.		Υ	
D	1	Unplug chargers, fans or any items not regularly used as they use energy even when turned off but still plugged in.		Υ	
E	1	Lower blinds in the summer and raise them in the winter to save energy and reduce burden on heating and cooling systems.		Υ	
F	3	Confirm that your building automation system is programmed to match your particular usage patterns.		Υ	
G	1	Make the most of natural light and turn off lights when possible.	Υ	Υ	
Н	1	Label light switches/controls with reminder to "Please turn off lights when not in use."		Υ	
ı	1	Replace end-of-life computer monitors with ENERGY STAR qualified flat screen monitors.		Υ	
		Replace end-of-life computer monitors with energy efficient, non-USA entity rated flat screen monitors, for Hines offices outside of the USA.			
J	3	Purchase ENERGY STAR qualified copiers, printers and appliances. http://www.energystar.gov/index.cfm?fuseaction=find_a_product		Υ	
		Purchase energy efficient, non-USA entity rated copiers, printer and appliances, for Hines offices outside of the USA.		ľ	
K	2	Set sleep modes for copier(s) and other peripherals to deactivate when not in use.		Υ	
L	1	Retrofit T-12 fluorescents to T-8's or T-5's if possible.	Υ	Υ	
M	2	Select and install recognized low-mercury content bulbs.	Υ	Υ	
N	2	Properly dispose of light bulbs containing mercury; recycling or reclaiming the mercury.			
0	2	Install lower watt bulbs in T-8 light fixtures.	Υ	Υ	
Р	2	Install compact fluorescent lighting in place of incandescent lighting.	Υ	Υ	
	27				







Internal Program

East	32
International	60
Midwest/Southeast	44
Southwest	26
West	45
Central	1
TOTAL OFFICES:	208

Over 200 Hines Offices in 17 Countries have achieved status as a Hines GREEN OFFICE.

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2211 Michelson, Irvine





222 Berkeley, Boston





EU Office, London



HinesGO

"HinesGO® expresses inwardly the sustainable approach we have used in our development and management services for decades."

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- Jeffrey C. Hines, President and CEO

Internal Program



April 2009

the deals [NATIONAL SCENE]

Leading Sustainable Real Estate Firm Unveils HinesGO® Tool To Green Office Space

The Houston office of Hines, the international real estate firm, today announced the unveiling of a green office program designed to enhance the sustainable features and operation of the space the firm occupies—more than 230 offices on four continents. Designed to complement the LEED* Green Building Rating System and the ENERGY STAR* "Bring Your Green to Work" program, HinesGO* (short for Hines GREEN OFFICE*) draws on 52 years of sustainable expertise attained through the development, management and acquisition of more than 1,100 properties around the world.

"HinesGO expresses inwardly the sustainable approach we have used in our development and management services for decades," said Hines President Jeffrey C. Hines. "Encouraging occupants to make greener choices is just as important as designing healthy, productive and environmentally friendly space. We look forward to offering this service to our tenants soon."

HinesGO helps identify and implement no-cost and low-cost alternatives to operating in a standard indoor office environment. Scored on a scale of 100, offices are evaluated in seven categories: Energy Efficiency, People & Atmosphere; Travel & Commuting; Reduce, Reuse & Recycle; Cleaning & Pest Control; Remodeling & Construction; and LEED and/or ENERGY STAR. When a specific strategy or improvement has been implemented, participants earn "Leaf Credits." If an office achieves 70 Leaf Credits, it is then designated as a Hines GREEN OFFICE.



Tenant Program

On April 22, 2009, (Earth Day) Hines announced the expansion of its internal program, HinesGO®, to a new audience –

4,300 office tenants occupying more than 120 million Hines-managed square feet **in more than 100 cities**.

Alan Cranfill
Program Administrato



Tenant **Program**



Over 41.2 million square feet of Hines leased space has achieved the designation!

Tenant Program

"Encouraging our tenants and their employees to make greener choices will pay off in environmental dividends, as well as in energy savings. *Our own employees have embraced the program, and our tenants have been asking for advice.* We hope this is only the beginning of an ongoing dialog of how we can all share responsibility for reducing greenhouse gas emissions."

- Jeffrey C. Hines, President and CEO



Tenant Program

Region	# of Tenants	GREEN OFFICE Tenant Square Footage per Region	Leased Square Footage by Region*	% GREEN OFFICE Tenant sf
East	86	8,928,493	12,959,676	68.89%
Midwest	46	6,351,830	21,340,227	29.76%
Southeast	15	1,169,608	5,492,101	21.30%
Southwest	153	9,194,956	15,576,680	59.03%
West	625	13,567,721	21,842,302	62.12%
TOTAL U.S.	925	39,212,608	77,210,986	50.79%
International **	40	1,994,193	42,880,265	4.65%
TOTAL GLOBAL	965	41,206,801	120,091,251	34.31%

+34% of Hines managed square feet is currently "green"

GREEN OFFICE for Tenants: Benefits

- Interface and collaborate with tenants
- Demonstrate leadership in sustainability and efficient operations
- > A value-added service to tenants with no or low cost
- Positive public relations
- Reduce operating expenses
- Lower net operating costs
- Increase asset value

C&W Earth Day Toolkit



Earth Day Tool Kit for C&W Managed Properties

The C&W Earth Day Tool Kit is designed to assist you with developing Earth Day activities at the property you manage. Click on the green folders **to** to link to websites with resources. Please use one or more of the suggestions below or combine with already planned activities. All initiatives related to Earth Day must be discussed with and approved by your client.

Organize an Earth Day Information Fair

Contact vendors to host information tables in the building lobby. Encourage vendors to share information about their environmental programs and products and provide give-aways.

Suggested vendors to contact:

- □ Waste haulers
- □ Product suppliers (i.e. Staples)
- □ Local utility companies (energy and water)
- □ Local public transportation organizations / employee commute programs
- □ Improve □ Imp

Post Visual Prompts and Distribute Information about Environmental Practices

Hang posters in key locations in the building and distribute tip cards and brochures (electronically, if possible) to prompt occupants to practice sustainability at work and at home.

EPA ENERGY STAR Free resources (download from Energy & Sustainability Taskforce Fusion Portal):

- C&W branded posters
- □ Earth Day poster
- □ "Bring Your Green to Work" tip card & poster
- □ "Join Us in the Fight Against Global Warming" booklet

DOE Free Resources:

DOE Earth Day images

Other options:

□ Develop your own posters and brand them with your client's and C&W's logo.

Inform Building Occupants of Environmental Best Practices Implemented at Your Property Gain recognition for your green actions by sharing your successes.

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- □ Document steps your property has taken to enhance energy efficiency and reduce water use and waste. Include information on implementation of C&W Green Practice Policies. If your property has earned the EPA ENERGY STAR label or has achieved a LEED certification, reference this as well.
- □ Circulate an electronic fact sheet on the property's environmental practices to building occupants.

Host a Recycling Collection Event

Earth Day is a great day to encourage building occupants to recycle unwanted items.

Suggested collection events:

- □ Electronic equipment
- □ Unwanted mobile phones and handheld devices
- □ Old eye glasses
- □ Batteries

Organize an Environmental Event

Raise awareness, build community, learn together and take action.

Host an event in your building:

- □ Show a film or video on an environmental theme in a conference room.
- □ Host a weekly lunch hour brown bag lunch series on environmental discussion topics.
- □ Invite a guest speaker to present at your property on an environmental topic Suggested volunteer events:
 - Organize a river clean up.
 - Organize a green home building project.
 - □ Contact your local City Parks Department
 - Design vour own clean up or volunteer event

Earth Day Every Day

Make it Earth Day every day. Create a green team and implement green operations and maintenance practices that enhance the environmental performance of your building.

Create a green team:

Start a green team at the office.

Implement green operations and maintenance practice:

- C&W Green Practice Policies (download from CW//Now; Business Resources; Policies Forms & Guidelines; Client Solutions; Property Facility Operations Manual).
- BOMA 40 Earth-Friendly Tips for Property Professionals

Encourage employees to become green commuters

- □ Provide employees with carpooling resources or set up an internal employee carpool website.
 Green your meetings and events
 - □ Make your next meeting green.
 - □ Donate leftover food from building events.

Take the C&W Environmental Challenge

Help C&W achieve its goal to reduce energy consumption, water use, and waste disposal by 10% by 2012, compared to a 2008 baseline across its managed portfolio. Benchmark your building's 2010 energy use and water consumption with Portfolio Manager and report 2010 waste disposal and recycling in Re-TRAC. Participating buildings meeting program requirements are eligible for recognition and awards.

For more information, access the C&W Environmental Challenge portal on FUSION.

Educate Yourself

Walking your talk is a good way to start being green.

Resources for personal actions:

- □ Study up on how you can go green at work.
- □ Calculate your carbon footprint.

Share Your Earth Day Event Successes

Gain recognition about your Earth Day events.

Document your Earth Day event by providing a written summary of activities and photos. Send in your case study to cssustanbility@cushwake.com by April 30th, 2010. Selected Earth Day activities in C&W managed properties will be featured in C&W's Energy and Sustainability Task Force Newsletter.

Questions

Contact cssustainability@cushwake.com.

**Disclaimer: Company and product listing do not represent endorsement by Cushman & Wakefield, Inc.



Document your Earth Day Events

- Share your Case Studies!
 - ▶ Send your case studies to <u>cissustainability@cushwake.com</u> by April 30th for a chance to be featured in the next Energy & Sustainability Taskforce Newsletter!





Environmental Challenge

WHAT ARE THESE AWARDS YOU SPEAK OF?

A C&W awards committee will select award winners among the properties that have obtained a Certificate of Participation; the property achievements will be presented to this committee without any building identifier information, to ensure fair judging without selection bias.

Awards will be announced the morning of April 22, 2012, better known as Earth Day.

Five properties will receive awards in the following categories:

- Greatest Overall Improvement THROUGH Time...since 2008 (NEW!)
- Set your baseline back to 2008 and compare your 2011 performance to when the C&W Environmental Challenge first began! This award will
 recognize the property that has made the greatest overall improvement since 2008.
- Greatest Overall Improvement Grand Prize
- For the property that demonstrates both the most significant environmental improvement and highest environmental performance.
- Greatest Environmental Improvement
- For the property with the greatest (1) energy reduction; and (2) water (indoor and outdoor) use reduction; and (3) waste reduction in 2011 over a 2010 baseline.
- Highest Performance
- For the property with (1) the highest energy performance rating (must have earned the ENERGY STAR label); and (2) lowest water consumption (indoor water consumption in gallons per gross square foot per annum); and (3) highest diversion rate in 2010.
- Best Tenant Engagement Strategy
- For the property with the best tenant engagement strategy, as demonstrated through occupant participation in building environmental initiatives and programs.

C&W Environmental Challenge

Tenant Engagement Strategy Winner & Runner-Up

555 17th Street, Denver CO

- very open communication with our tenants.
- Property Manager and Portfolio Manager make a point to meet with each tenant representative(s) bi-annually.
- tenant events year round:
 - Earth Day Food Bank Drive with the possibility to win a Vespa, a bicycle, an herb garden or reusable bags and tumblers
 - Bike-2-Work Day promotion
 - Tenant Appreciation Holiday Party

Atria Corporate Center, Plymouth MN

- 2012 marked the 4th anniversary of ATRIA's Earth Fair with approximately 300 tenant/employees stopping to visit.
 - Vendors included janitorial, recycling and food service vendors as well as community information for our city's local resources for transportation and volunteer opportunities.
 - Hosted free recycling opportunity to our tenants including: batteries, cell phones, and light bulbs
 - Provided examples and visual aids of our lamp recycling, new LED fixtures, and landscape/snow removal policies among others such as
 - new paper products for the restrooms that were scheduled for a trial run a week later.
- communication throughout the year: tenant handbook, tenant correspondence, signage, quarterly meetings with tenant contacts, and a quarterly newsletter.

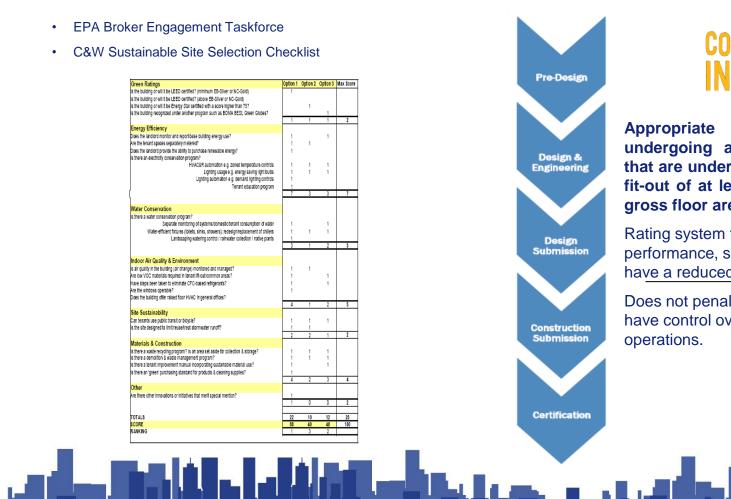
Site Selection & LEED CI spaces

- Tenants want to "check the box"
- Importance of Brokers in the process
 - **EPA Broker Engagement Taskforce**
 - C&W Sustainable Site Selection Checklist

Green Ratings	Option 1	Option 2	Option 3	Max Score
is the building or will it be LEED certified? (minimum EB-Silver or NC-Gold)	1			
is the building or will it be LEED certified? (above EB-Sliver or NC-Gold)				
is the building or will it be Energy Star certified with a score higher than 75?		1		
is the building recognized under another program such as BOMA BESt, Green Globes?			1	
	- 1	1	1	2
Energy Efficiency				
Does the landlord monitor and report base building energy use?	- 1		1	
Are the tenant spaces separately metered?	1	1		
Does the landlord provide the ability to purchase renewable energy?	1			
is there an electricity conservation program?				
HVAC&R automation e.g. zoned temperature controls	1	1	1	
Lighting usage e.g. energy saving light bulbs	1	1	1	
Lighting automation e.g. demand lighting controls	1			
Tenant education program	- 1			
	7	3	3	7
Water Conservation				
is there a water conservation program?				
Separate monitoring of systems/domestic/tenant consumption of water	1		1	
Water-efficient fixtures (toilets, sinks, showers); redesign/replacement of chillers	1	1	1	
Landscaping watering control / rainwater collection / native plants	1			
	3	1	2	3
Indoor Air Quality & Environment				
is air quality in the building (air change) monitored and managed?		4		
Are low VOC materials required in tenant fil-outcommon areas?	1 1	- '	1	
Have steps been taken to eliminate CFC-based refrigerants?	1 :		- 1	
nave steps been taken to entitriate or o-based reingerants: Are the windows operable?	1 1			
Does the building offer raised floor HVAC in general offices?	1 '			
Does the building that hades not trivio in general directs.	4	1	2	5
Site Sustainability	<u> </u>			_
Can tenants use public transit or bicycle?	1	1	1	
is the site designed to limitireuse/treat stormwater runoff?	I i	- 1		
	2	2	1	2
Materials & Construction	_			
is there a waste recycling program? Is an area set aside for collection & storage?	1	1	1	
is there a demolition & waste management program?	Li	i	i	
is there a tenant improvement manual incorporating sustainable material use?	Ιi		1	
is there an 'green' purchasing standard for products & cleaning supplies?	1			
	4	2	3	4
Other				
Are there other innovations or initiatives that merit special mention?	- 1			
	1	0	0	2
	L.			
			12	25
TOTALS	22	10		
TOTALS SCORE Ranking	88	40 3	48	100

LEED for Commercial Interiors

C&W Project Management Services

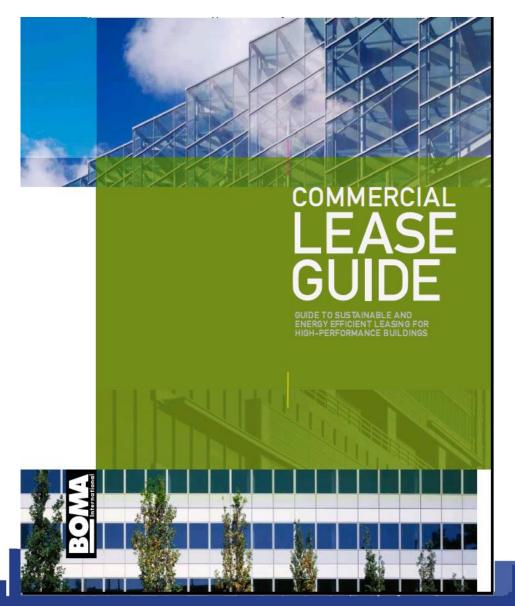


Appropriate interior spaces undergoing alterations work; spaces that are undergoing a complete interior fit-out of at least 60% of the certifying gross floor area

Rating system focuses on highperformance, sustainable interiors that have a reduced environmental impact.

Does not penalize tenants who many not have control over whole building operations.

BOMA Green Lease Guide





Why Engage Tenants?

"We designed the best, most energy efficient building you could possibly want, but then we ran into one big problem.

. .

... the people moved in."

-- Anonymous Architect





Considerations in Engaging Tenants

- ► Traditional focus on building managers and owners because they "control" the buildings.
- ▶ Tenants harder to reach more diverse group.
- ▶ Tenants impact energy use directly and indirectly.
- ▶ Differing value propositions.
- ▶ Difficult to design "one-size-fits-all" programs to support/incentivize tenants.



Tenant Best Practices

- ▶ Not your traditional best practices report.
- ▶ Focus on highlighting collaboration between tenant and landlord.
 - Overcoming the Split-Incentive Barrier
 - Increasing Efficiency at Build-Out
 - Measuring, Metering, and Sharing Data
 - Tenant Education and Engagement
- Currently gathering information and producing case studies and we can always use more!!!
- ▶ Planned release Fall 2013



300 Solon Family Health Center Memorial Arts Building Weather-Normailized Source Energy Use Intensity Virginia Beach Convention Center 522 Fifth Avenue Sheraton Austin Hotel 175 Crystal River Elementary School Courtyard by Marriott San Diego Downtown Van Holton Primary School 75 10/09 11/09 12/09 1/10 2/10 3/10 4/10 5/10

2010 Results

- Together, in one year, the 14 competitors saved:
 - 44 million kBtu
 - Nearly 5,000 metric tons of greenhouse gas emissions
 - More than \$950,000



50

450 400 350 Weather-Normalized Source Energy Use Intensity 300 Fannie Mae Office Building at 3939 Wisconsin Avenue (34.6%) Denver North Suburban Medical Office Building (33.7%) 200 Office Depot - Plano (34.1%) 150 Office Depot - Raleigh (33.1%) Twinsburg High School & Sports Complex (46.3%) Kokomo High School (32.3%) Polaris Career Center (43.4%) 100

10/10 11/10 12/10 1/11 2/11 3/11 4/11 5/11 6/11 7/11 8/11

Twelve-Month Period Ending Date

Scientific Instuments (42.2%)

Hartman Elementary School (43.2%)

Parking Garage C (63.2%)

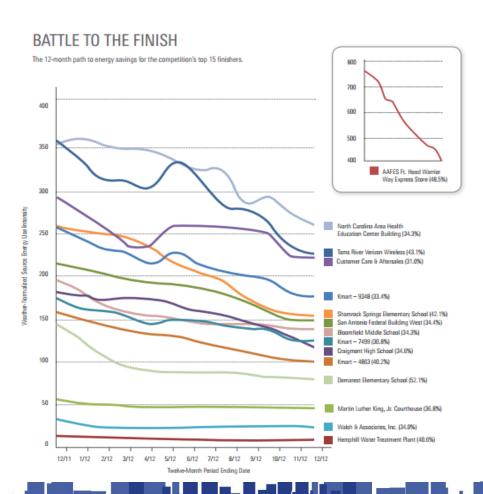
2011 Winners

· In 2011:

- 245 competitors saved 240 million kBtu of energy and \$5.2 million on utility bills
- Top 10 finishers saved 30% or more
- 75 competitors saved 10% or more

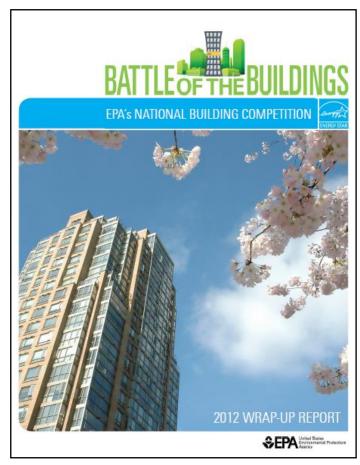


Biggest savings yet in 2012



- ▶ 3,000+ competitors saved more than \$50 million and 3 billion kBtu, equivalent to the annual electricity use of more than 43,000 homes
- ▶ Top 15 all reduced by more than 30%
- ▶ 85+ buildings reduced energy use by 20% or more
- ▶ Buildings that reduced saved an average of \$25,000 and 8% in energy use

Read about the Battle



▶ For more information and the stories behind the battle, please see the 2012 Wrap-Up Report, at

energystar.gov/battleofthebuildings



Why Competitions?

Because to the average person,

ENERGY EFFICIENCY IS BORING!!!!!

"Energy Efficiency . . . has an image problem. It lacks pizzazz, that certain je ne sais quoi, that ooh la la sex appeal that makes us pay attention and act."

Renewable Energy Alaska Project (REAP) Energy Efficiency is "Sexy" Photo
 Contest



New for 2013 . . .

- ▶ Tenants can compete!!!!
- ▶ Idea launched in conversations with CRE sector partners.
- Fosters partnership between tenant and landlord.
- Engages building occupants in a fun, positive way.
- ► Easy sign-up through Portfolio Manager, but entries close May 31.



L'Oreal USA "I've Got the Power": Educate, Motivate, Recognize & Reward

Educate/Learn

- Communicate L'Oréal goal to reduce environmental footprint
- Use Energy Champs to educate colleagues on each floor about how they can conserve electricity

Motivate

- Incent a floor by floor competition to reduce electrical consumption
- Measure results

Recognize

- Announce monthly winners on Facebook
- Call out negative behavior

Reward

• Winning floor receives \$5K cash prize



Educate & Motivate



Posters











T-Shirts



Light Switch Covers





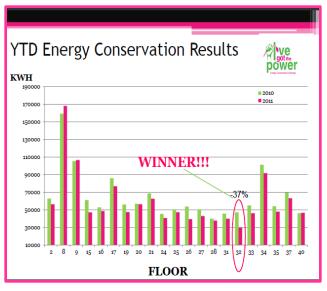




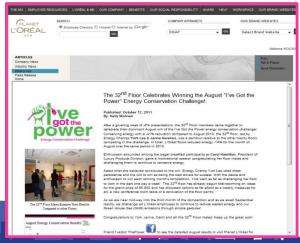


Recognize, Reward & Reinforce











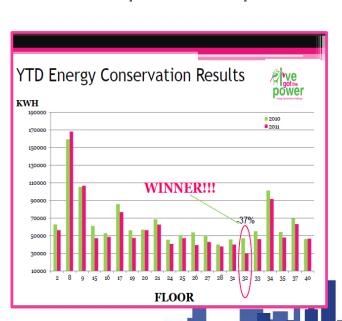


Results

- ▶ Reduced total electrical usage by 9% (Aug-Jan 22 Floors)
- ▶ Reduced total electrical costs by \$16,500
- ▶ Winning floor reduced consumption by 37%
- ▶ Recognition in L'Oréal 2011 Sustainable Development Report



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ENERGY STAR Guide to Energy Efficiency Competitions for Buildings & Plants

www.energystar.gov/competitionguide

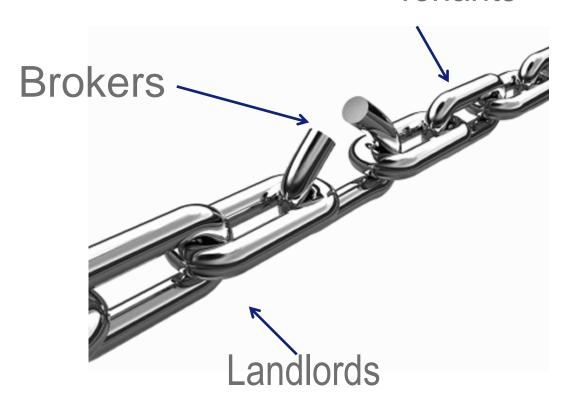








Tenants





Why Engage Brokers?

- Bridge the gap between tenant and landlord.
- Opportunity to educate prospective tenants.
- Communicate financial value of energy efficient and green buildings.
- Significant challenges exist:
 - One goal close the deal as fast as possible.
 - "When people start asking for it, I'll start learning about it."



Targeting Brokers

- ▶ Gathering input from senior brokers.
- Differing approaches
 - Conference presentations
 - Breakfast/lunch presentations
 - Educational avenues
 - Target regions
 - Build the demand side
- ▶ Will we succeed???



For More Information

ENERGY STAR Buildings:

www.energystar.gov/buildings

Portfolio Manager:

www.energystar.gov/benchmark



Roundtable Discussion











Open for Questions

