

Presentation at



The 2011 Sustainable Universities & Colleges Symposium

October 28, 2011

The Paid-from- Savings Guide to Green Existing Buildings

ILLINOIS
GREEN GOVERNMENTS
COORDINATING COUNCIL



USGBC Paid-From-Savings Guide to Green Existing Buildings

Marion “Doc” Kotecki LEED AP
Account Executive, Energy Systems Group



**U.S. Green Building Council –
Illinois Chapter**
**USGBC Green School Advocacy
Committee Co-Chair**

Dkotecki@EnergySystemsGroup.com

Agenda

Dual Track

1. LEED EBOM



2. Performance Contracting





US Green Building Council

- National Perspective
 - 501 c3 non-profit organization
 - 20,000 member companies and organizations
 - 140,000 LEED Accredited Professionals
 - 78 local chapters
 - Based on volunteer participation

Triple Bottom Line

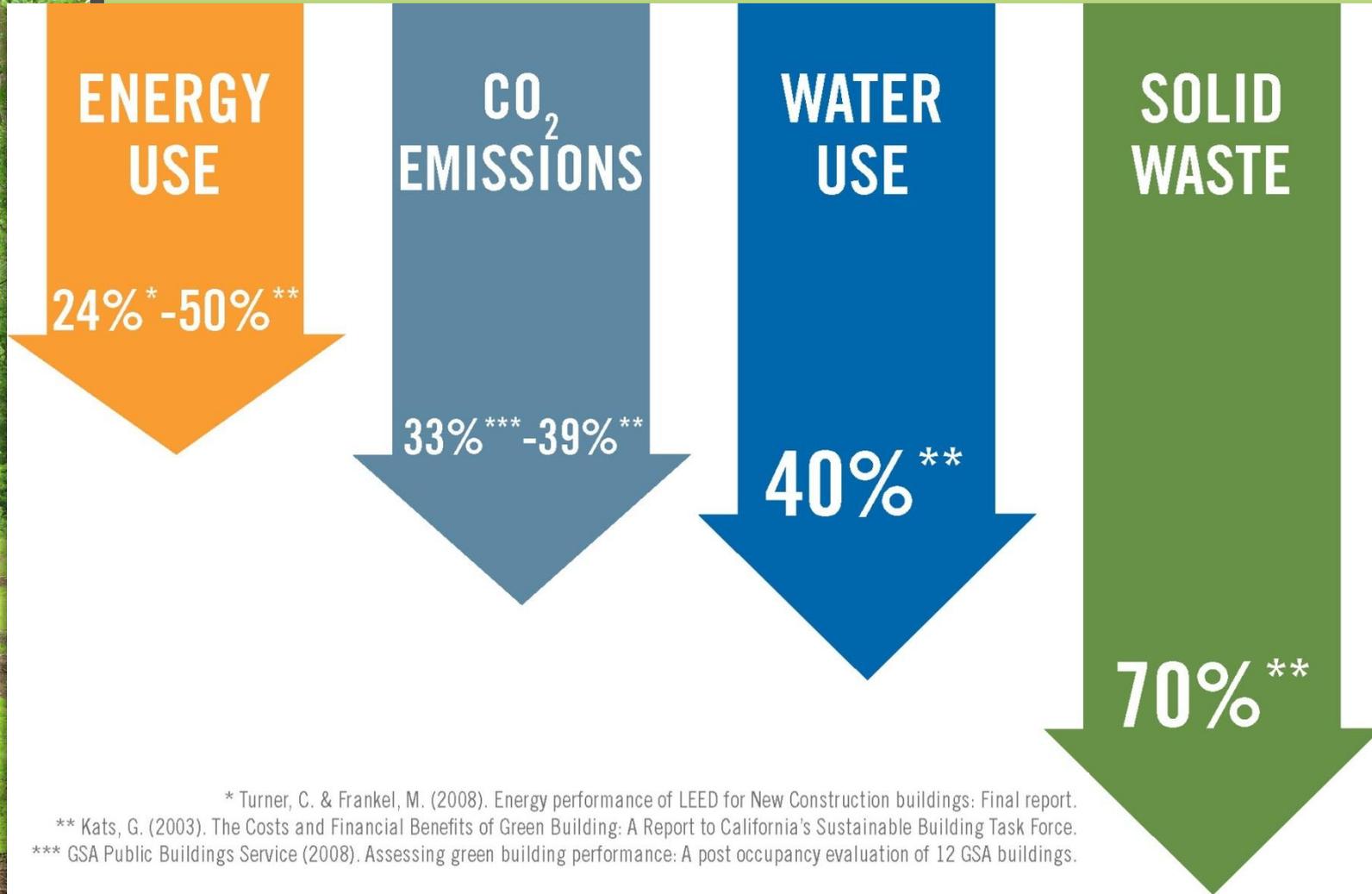


U.S. Building

Impacts:



Green Buildings Can Reduce...



* Turner, C. & Frankel, M. (2008). Energy performance of LEED for New Construction buildings: Final report.

** Kats, G. (2003). The Costs and Financial Benefits of Green Building: A Report to California's Sustainable Building Task Force.

*** GSA Public Buildings Service (2008). Assessing green building performance: A post occupancy evaluation of 12 GSA buildings.



Leadership in Energy and Environmental Design

A leading-edge system
for certifying the
greenest performing
buildings in the world

| LEED® Facts | |
|--|------------------|
| Building size | 12,000 square ft |
| Type of building | |
| LEED for Core & Shell Development Certification awarded July 27, 2009 | |
| LEED Rating | Platinum |
| Water Efficiency | 100 |
| Energy Efficiency | 100 |
| Materials & Resources | 100 |
| Indoor Environmental Quality | 100 |
| Smart Market | 100 |
| Sum of all | 497 |

| LEED® Facts | |
|--|------------------|
| Building size | 12,000 square ft |
| Type of building | |
| LEED for Core & Shell Development Certification awarded July 27, 2009 | |
| LEED Rating | Platinum |
| Water Efficiency | 100 |
| Energy Efficiency | 100 |
| Materials & Resources | 100 |
| Indoor Environmental Quality | 100 |
| Smart Market | 100 |
| Sum of all | 497 |

| LEED® Facts | |
|--|------------------|
| Building size | 12,000 square ft |
| Type of building | |
| LEED for Core & Shell Development Certification awarded July 27, 2009 | |
| LEED Rating | Platinum |
| Water Efficiency | 100 |
| Energy Efficiency | 100 |
| Materials & Resources | 100 |
| Indoor Environmental Quality | 100 |
| Smart Market | 100 |
| Sum of all | 497 |



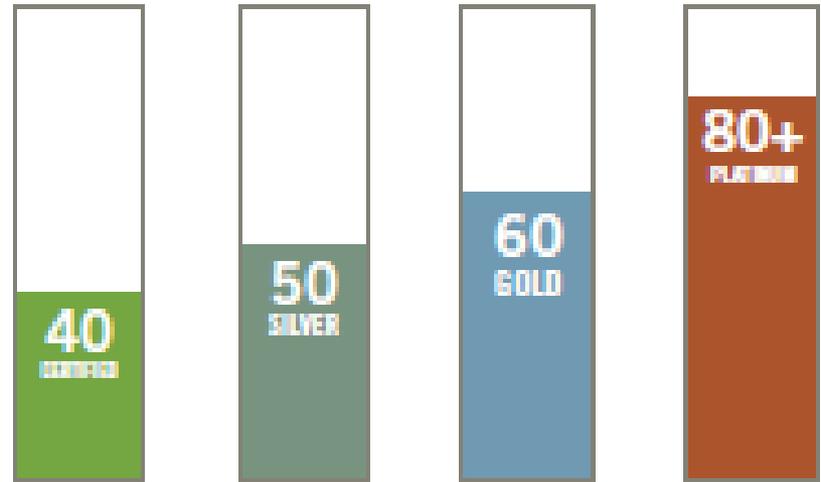
| Nutrition Facts | |
|--------------------------------|----------------------|
| Serving Size 8 crackers (28g) | |
| Servings Per Container About 2 | |
| Amount Per Serving | |
| Calories 120 | Calories From Fat 30 |
| % Daily Value* | |
| Total Fat 3.5g | 5% |
| Saturated Fat 1g | 5% |
| Trans Fat 0g | |
| Polyunsaturated Fat 1.5g | |
| Monounsaturated Fat 0.5g | |
| Cholesterol 0mg | 0% |
| Sodium 140mg | 6% |
| Total Carbohydrate 22g | 7% |
| Dietary Fiber Less than 1g | 3% |
| Sugars 7g | |
| Protein 2g | |
| Vitamin A 0% | Vitamin C 0% |
| Calcium 10% | Iron 4% |

* Percent Daily Values are based on a 2,000 calorie diet.

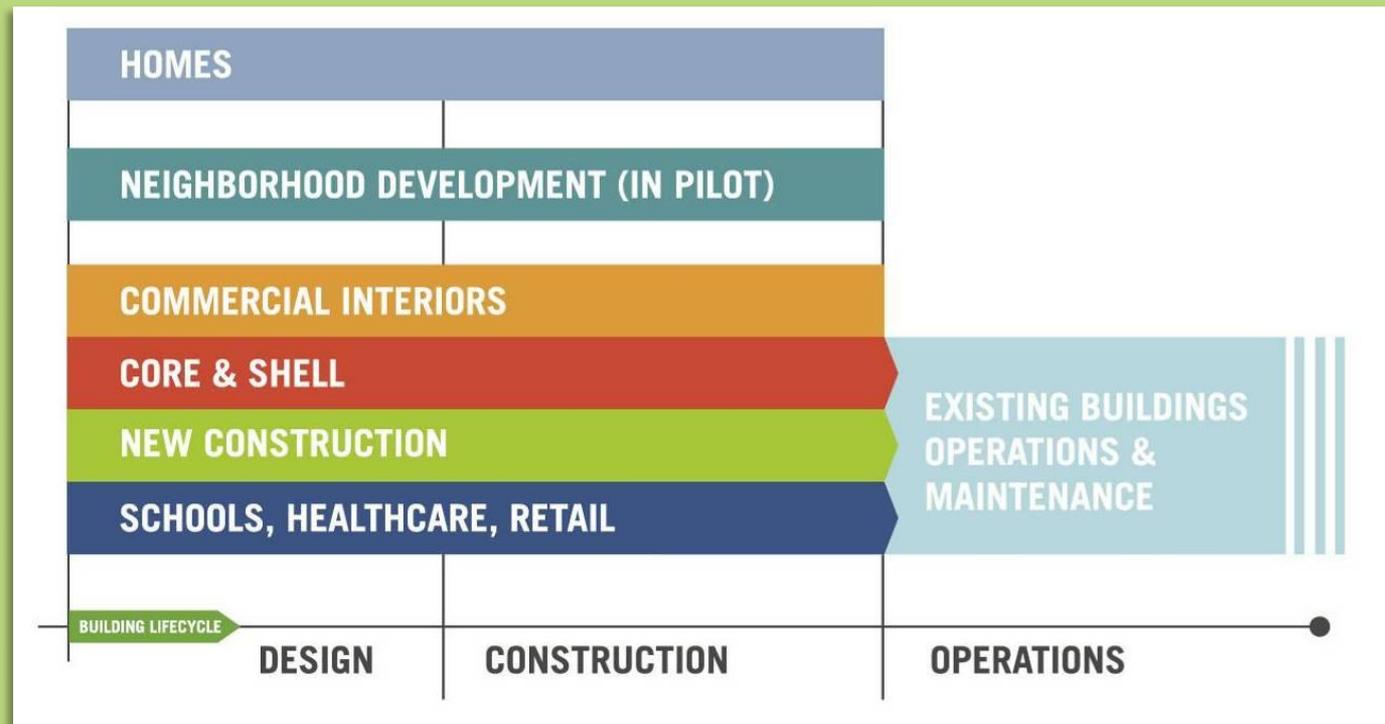
CONTINUED ON OTHER SIDE

USGBC Has Four Levels of LEED

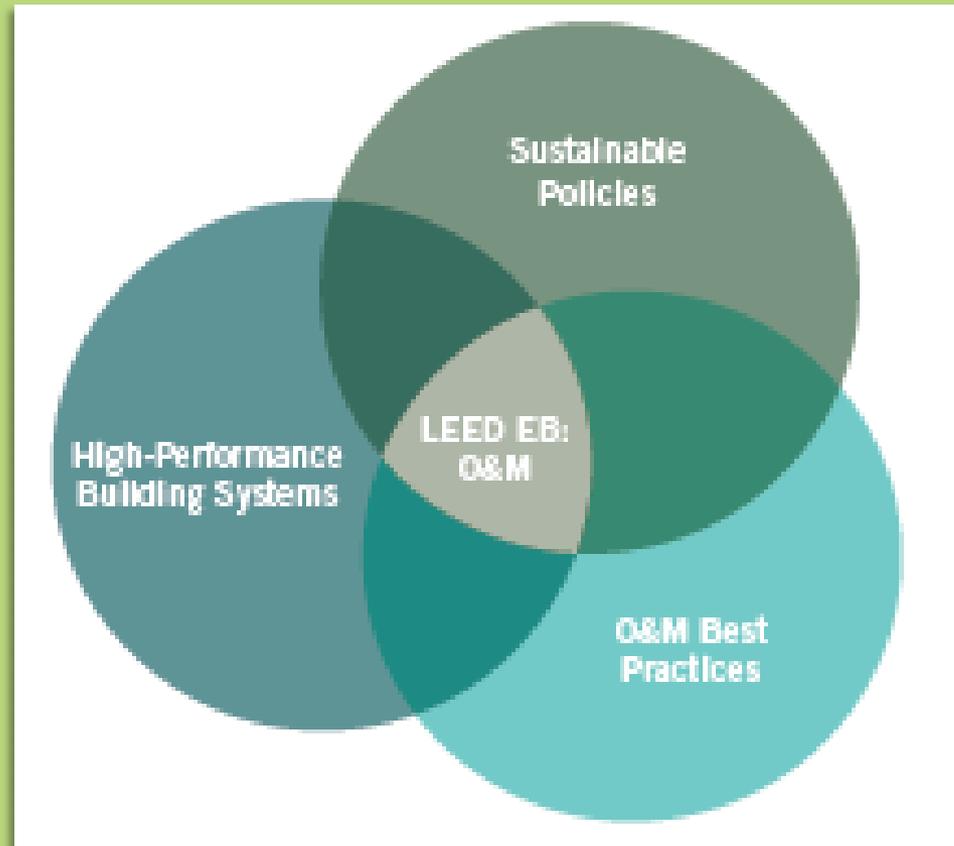
100-POINT SCALE



LEED Addresses the Complete Lifecycle of Buildings



LEED for Existing Buildings: Operations & Maintenance



LEED[®] Rating System

-  Sustainable Sites (SS)
-  Water Efficiency (WE)
-  Energy & Atmosphere (EA)
-  Materials & Resources (MR)
-  Indoor Environmental Quality (IEQ)
-  Innovation in Operations (IO)
-  Regional Priority (RP)

LEED for Existing Buildings

- ENERGY STAR rating of 65
- Uniform Plumbing Code of 2006
- Minimum Outdoor air requirement
- Energy Efficiency – best practices
- Refrigerant management
- Tobacco Smoke control
- Sustainable purchasing Policy
- Solid Waste Management
- Green Cleaning



Six Steps

Paid-from-savings approach

1. LEED requirements
2. Project preparation
3. LEED certification assessment
4. Economics and financing
5. Project implementation
6. LEED certification



Paid-From-Savings

- Who are the best candidates?
- Performance contracting as a project delivery method
- ESCO (Energy Services Company) guarantees the savings



Six Steps

Green PC

- A. Green PC preparation
- B. ESCO partner selection
- C. Investment-grade energy audit
- D. Project development plan
- E. Measurement & verification plan
- F. Green PC agreement



Paid-From-Savings

Comparing PC to Green PC

- Traditional PC based on installing high-performance building systems that reduce energy and water consumption
- Green PC enhances the process by utilizing LEED EB O&M
 - ESCO cannot guarantee level of LEED certification
 - Best practice and sustainable policies fall under the purview of the owner

Green PC Preparation

- Ensure team members know the fundamentals of performance contracting and the laws and regulations that govern it in the state.
- Conduct a PC mini-audit to assess whether the project meets the criteria for the performance contracting project-delivery method.

ESCO partner selection

- Develop the RFP/Q; indicate the goal of achieving LEED for Existing Buildings: O&M certification.
- Determine the ESCO selection process; require the ESCO to be knowledgeable of the LEED for Existing Buildings: O&M rating system.
- Add the ESCO to the project team when selected.

Investment-grade energy audit

- Include LEED certification assessment tasks in the audit's scope-of-work.
- Data collected sets the basis for the savings guarantee, project development plan, and M&V plan.

Project development plan

- ESCO identifies proposed project measures as savings opportunities and LEED certification opportunities.
- Final plan will bundle all project measures— including those needed for LEED certification— to ensure the desired ROI and simple pay-back period are realized

Measurement & verification plan

- Describe the pre- and post-project conditions, based on the energy audit, and how these conditions will generate savings.
- Describe how actual savings will be verified.
- Owner and the ESCO agree on how the adjusted baseline will be calculated.

Green PC agreement

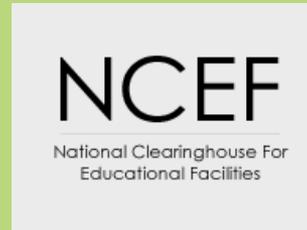
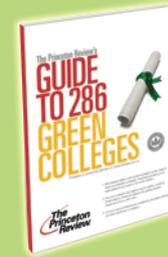
- Modify traditional performance contract language to include details on efforts to seek LEED certification.
- Outline the responsibilities of the ESCO and those of the owner.

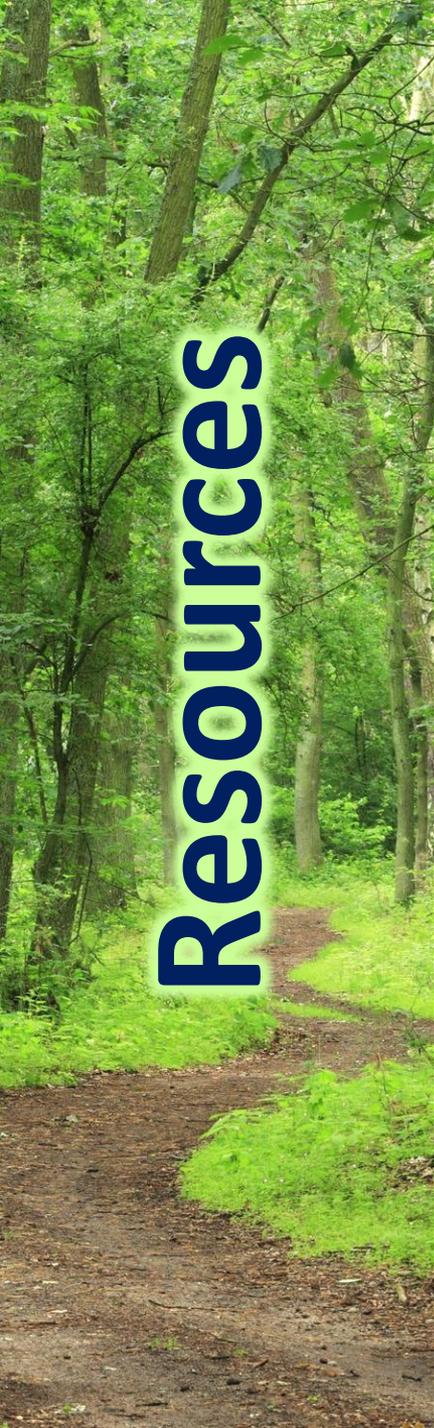
Paid-From-Savings

- ✓ Glossary of key terms
- ✓ LEED prerequisites & credits and their savings potential
- ✓ Education & information resources
- ✓ LEED certification assessment
- ✓ O&M policy model
- ✓ Financing options
- ✓ Measurement & verification
- ✓ Green PC RFP/Q language
- ✓ Green PC audit agreement
- ✓ BIM overview



Resources

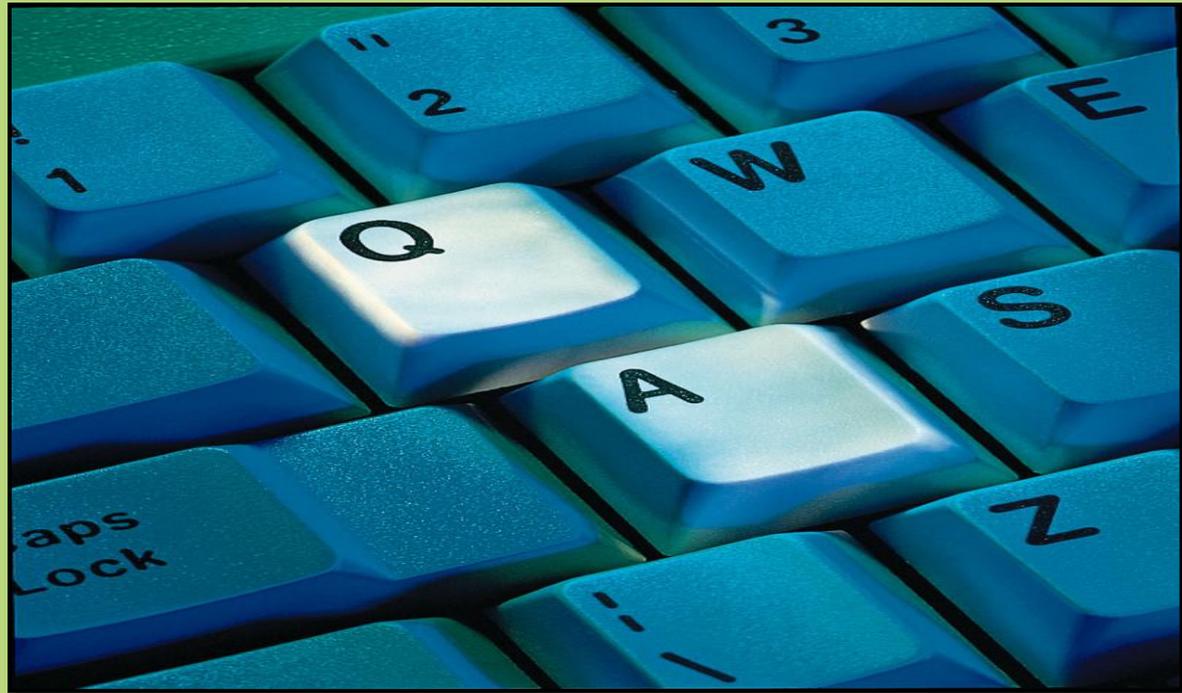




Resources

- Association for the Advancement of Sustainability in Higher Education (AASHE): <http://www.aashe.org>
- Association of Energy Engineers: www.aeecenter.org
- Association of Higher Education Facilities Officers (APPA): www.APPA.org
- American College and University Presidents' Climate Commitment (ACKUPCC): www.presidentsclimatecommitment.org
- Center for Green Schools
- Energy services Coalition: www.energyservicescoalition.org
- EPA's ENERGY STAR® for Buildings: www.energystar.gov
- Illinois DCEO: www.illinoisenergy.org
- National Association of College and University Business Officers (NACUBO): www.NACUBO.org
- National Association of Energy Service Companies: www.naesco.org
- National Clearing house for Educational Facilities: www.ncef.org
- Society for College and University Planning (SCUP): www.SCULO.org
- US Department of Energy's Guide to Financing EnergySmart Schools: www1.eere.energy.gov/buildings/energysmartschools/financing_guide.html
- U.S. Green Building Council: www.usgbc.org
- U. S. Green Building Council – Illinois Chapter: www.usgbc-illinois.org

Question & Answer Session



Thank you for your time!



*Marion "Doc" Kotecki, LEED AP
Account Executive*

Energy Systems Group

500 Park Boulevard, Suite 760

Itasca, IL 60143

www.energysystemsgroup.com

DKotecki@energysystemsgroup.com

Cell: 224-221-1605

