

The background features abstract, overlapping green geometric shapes in various shades of green, creating a modern and dynamic feel. The shapes are primarily located on the left and right sides of the slide, framing the central text.

Overview of the Business Case for LEED

2/18/17

Mike Hess, PE, LEED Fellow

- ▶ Current roles
 - ▶ Vice President, Smart and Sustainable Buildings, Panasonic
 - ▶ Chair, US Green Building Council (USGBC) Florida
- ▶ Past roles
 - ▶ Principal, Earth and Commissioning, exp
 - ▶ Managing Member, GreenTime LLC
 - ▶ USGBC National Board of Directors, 2006-2010
 - ▶ USGBC Florida & Caribbean Regional Representative, 2006-2011
 - ▶ Two time chair of the USGBC Central Florida
- ▶ Experience on well over 100 LEED Certified projects

Additional constructions costs for LEED-certified buildings

Average for offices and schools, based on 40 buildings



Average
Savings of
Green
Buildings



Source:
Capital E

Results of the
California
Study: **Average
Bottom Line
Savings**

GREEN IMPROVEMENTS PAY FOR
THEMSELVES IN **3** YEARS

(ANNUAL RETURN ON INVESTMENT IS 25-40%)



The William and
Flora Hewlett
Foundation
Menlo Park CA
LEED Gold

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Case Study - International Restaurant and Retail Chain

2/18/17

Background Info

- ▶ Restaurant / retail chain with over 150 locations throughout the world
- ▶ Corporate motto related to sustainability
- ▶ Wanted to start “walking the walk”
 - ▶ Energy / sustainability audits of 2 existing restaurants (Pittsburgh and Boston) including cost / benefit projections if they had been green
 - ▶ Draft revision of corporate restaurant design guidelines around LEED and Green
 - ▶ Implemented guidelines and achieved LEED
 - ▶ Nashville - Certified
 - ▶ Dallas, Seattle, Los Angeles and Honolulu - Silver
 - ▶ Validated first cost / benefit projections to finalize corporate standards

Additional First Cost Summary

- ▶ Most projects achieved Silver and were close to Gold
- ▶ Actual first cost increase ranged from 1.4% to 1.8%



Additional First Costs per LEED Credit

	Seattle	Dallas
	Extra Cost	Extra Cost
LEED Consulting	\$15,000.00	\$12,000.00
Contractor Admin	\$20,000.00	\$20,000.00
Site credits		
Site Selection	\$2,500.00	\$0.00
Water Efficiency credits		
Water use reduction	\$1,000.00	\$0.00
Energy Credits		
EAp1 Commissioning	\$15,000.00 ⁽¹⁾	\$12,000.00
1.1/1.2 Lighting	\$2,500.00	\$500.00
1.3B HVAC	\$17,500.00 ⁽²⁾	\$5,000.00
1.4 Equip/Appliances	(\$4,000.00)	(\$500.00)
6 Green Power	\$1,000.00	\$500.00
Materials Credits		
2 Waste Mgmt	\$0.00	\$8,000.00
3.1/3.2 Resource/Reuse	\$25,000.00	\$0.00
4.1/4.2 Recycled Content	\$1,500.00	\$4,000.00
Indoor Environment Credits		
1 OA Monitoring	\$2,500.00	\$0.00
3.1/3.2 IAQ Mgmt	\$1,500.00	\$5,000.00
4.1 Low Emitting sealants	\$2,500.00	\$0.00
5 Source Ctrl	\$6,000.00 ⁽³⁾	\$13,600.00
6.2 Controllability	\$2,000.00	\$0.00
7.2 Comfort monitoring	\$0.00	\$1,000.00
Totals	\$111,500.00	\$81,100.00

Notes:

- (1) Contractor indicated they want to increase cost for future projects
- (2) Includes cost for Comfort Monitoring EQc7.2
- (3) Cost would be reduced if MERV 13 filters were saved until end of construction

LEED Credits w/o Additional Costs

- ▶ SSc2 Development Density/Community Connectivity
- ▶ SSc3 Alternative Transportation - Public Transportation Access
- ▶ WEc1 Water Use Reduction
- ▶ MRc5.1 Regional Materials
- ▶ EQc4.2 Low Emitting Materials, Paints and Coatings
- ▶ EQc4.3 Low Emitting Materials, Carpet Systems
- ▶ EQc4.5 Low Emitting Materials, Systems Furniture/Seating
- ▶ EQc7.1 Thermal Comfort - Compliance

Benefits Summary

- ▶ 42% less water usage for restrooms
- ▶ 58% less energy per square foot than Pittsburgh and Boston restaurants
- ▶ 12.5% less energy per square foot than a typical new restaurant
- ▶ Average total energy & water savings of \$0.75/sq ft per year compared to a typical new restaurant
- ▶ 50% of energy from offsite renewable power
- ▶ Better indoor air quality due to filtration, low emitting materials, etc.
 - ▶ Promotes better Occupant Health
 - ▶ Improves employee performance
 - ▶ Improves customer experience

Benefits Summary

- ▶ Supports Local Economy
 - ▶ Regional materials
 - ▶ Reduces Pollution associated with material transportation
- ▶ Reduced waste
 - ▶ Salvaged materials
 - ▶ Materials with recycled content
 - ▶ 75%+ of construction waste being recycled
- ▶ 21% CO2 emission reductions per restaurant - equivalent to burning 2,500 gallons of gas per year
- ▶ Typical annual energy / water cost savings of \$10k per year - 8 to 12 year simple payback w/o escalation or other operational savings



Conclusions

- ▶ LEED doesn't have to cost that much
- ▶ It will pay back quickly, it is typically a good investment