

# Quantifying Financial Benefits & Bankability of LEED Projects

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# Quantifying Financial Benefits & Bankability of LEED Projects

## ♪ How to Sell it to the Owner

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Microgrid Energy

## ♪ How to Sell it to the Bank

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CLARUS ADVISORS, LLC.



# What Are We Talking About?

- Common Financial Terms and Developer-speak
- Finance 101, or “What You Would Have Learned in College Had You Been Paying Attention”
- How to Provide Financial Benchmarks for LEED and Green Building Projects
- Incentives for Green Building (and Renewable Energy)



# LEED Market References

- Natural Capitalism; Amory Lovins, L. Hunter Lovins, & Paul Hawken
- Deutsche Bank RREEF Real Estate Equity Fund
- McGraw Hill Construction Corporate Real Estate SmartMarket Report
- Davis Langdon / AECOM
- PNC Financial Services Group
- Transwestern Tenant Satisfaction Assessment
- Hines Investments LP
- Ernst & Young
- Pacific Security Capital
- Fireman's Fund
- Lawrence Berkeley National Laboratory



## Perception: C-Suite Executives

44% -- green buildings attract and retain key, top-performing employees.

67% -- green building is a key market differentiator.

82% -- anticipate “greening” part of their portfolio in the next 2 years.

McGraw Hill, Corporate Real Estate Smart Market Report



## Perception: Corporate Tenants

- Employee retention and satisfaction 50% better for a LEED-certified building.
- High-performance lighting and individual HVAC controls improve productivity 6.7% and 3.6%, respectively.
- 44% of tenants believe environmental impact is “very important” to their company.
- 25% of tenants state that green building practices are important to real estate search process.

Transwestern Tenant Satisfaction Assessment  
PNC Financial Services  
McGraw Hill, Corporate Real Estate Smart Market Report



## Perception: Portfolio Property Managers

- Green building is redefining what constitutes Class-A office space and even institutional-quality real estate.
- An opportunity for companies to position themselves strategically and gain a competitive advantage.
- Green building projects:
  - secure more development finance;
  - Attract new tenants seeking green space;
  - Enjoy reduced operating costs; and
  - Realize stronger investment value.

Transwestern Tenant Satisfaction Assessment

PNC Financial Services

McGraw Hill, Corporate Real Estate Smart Market Report



**2009 ERNST  
& YOUNG  
BUSINESS  
RISK REPORT**

In the next construction cycle in the US, **virtually all new major office buildings will be green and tenants will be better informed**

This is likely to have a negative impact on the value of existing Class A buildings that are not compliant and boost the retrofitting of existing buildings.

- Moved from Sears Tower (a.k.a. Willis Tower) to new LEED-CI space.
- Committed to 1/3 of their portfolio LEED certified by this year (2012).





# Triple-Bottom Line

## *Challenges?*

Investment Performance  
Value Engineering  
LEED Extras  
Bankability  
First Cost  
Communicating



# Rosetta Stone for R.E. Development

- Budgetary Operating Expenses
- Time Value of Money, Discount Rate, & NPV
- Net Operating Income (NOI)
- Cap Rate & Building Value
- Full Service vs Triple-Net



# Rosetta Stone for R.E. Development

- ***Budgetary Operating Expenses***
- Time Value of Money, Discount Rate, & NPV
- Net Operating Income (NOI)
- Cap Rate & Building Value
- Full Service vs Triple-Net

## **T.I.M.M.U.R.**

Taxes

**Insurance**            \$ 0.50 / sf

Management

Maintenance

**Utilities**            \$ 2.90 / sf (\$2.40/sf energy, \$0.50/sf water)

Reserves



# Rosetta Stone for R.E. Development

- Budgetary Operating Expenses
- ***Time Value of Money, Discount Rate & NPV***
- Net Operating Income (NOI)
- Cap Rate & Building Value
- Full Service vs Triple-Net

Dollar Today > Dollar Tomorrow

Discount Rate

Discount of Future Expenses or Revenues

Excel functions: PV, NPV, FV

Compare to ROI



# Rosetta Stone for R.E. Development

- Budgetary Operating Expenses
- Time Value of Money, Discount Rate & NPV
- ***Net Operating Income*** = Revenue – Operating Expenses
- Cap Rate & Building Value
- Full Service vs Triple-Net



# Rosetta Stone for R.E. Development

- Budgetary Operating Expenses
- Time Value of Money & Discount Rate
- Net Operating Income (NOI)
- **Cap Rate & Building Value**
- Full Service vs Triple-Net

$$\frac{\text{N.O.I.}}{\text{Cap Rate}} = \text{Building Value}$$

$$\frac{\$ 100,000}{8\%} = \$ 1,250,000$$



# Rosetta Stone for R.E. Development

- Budgetary Operating Expenses
- Time Value of Money & Discount Rate
- Net Operating Income (NOI)
- Cap Rate & Building Value
- ***Full Service vs Triple-Net***

## Full Service

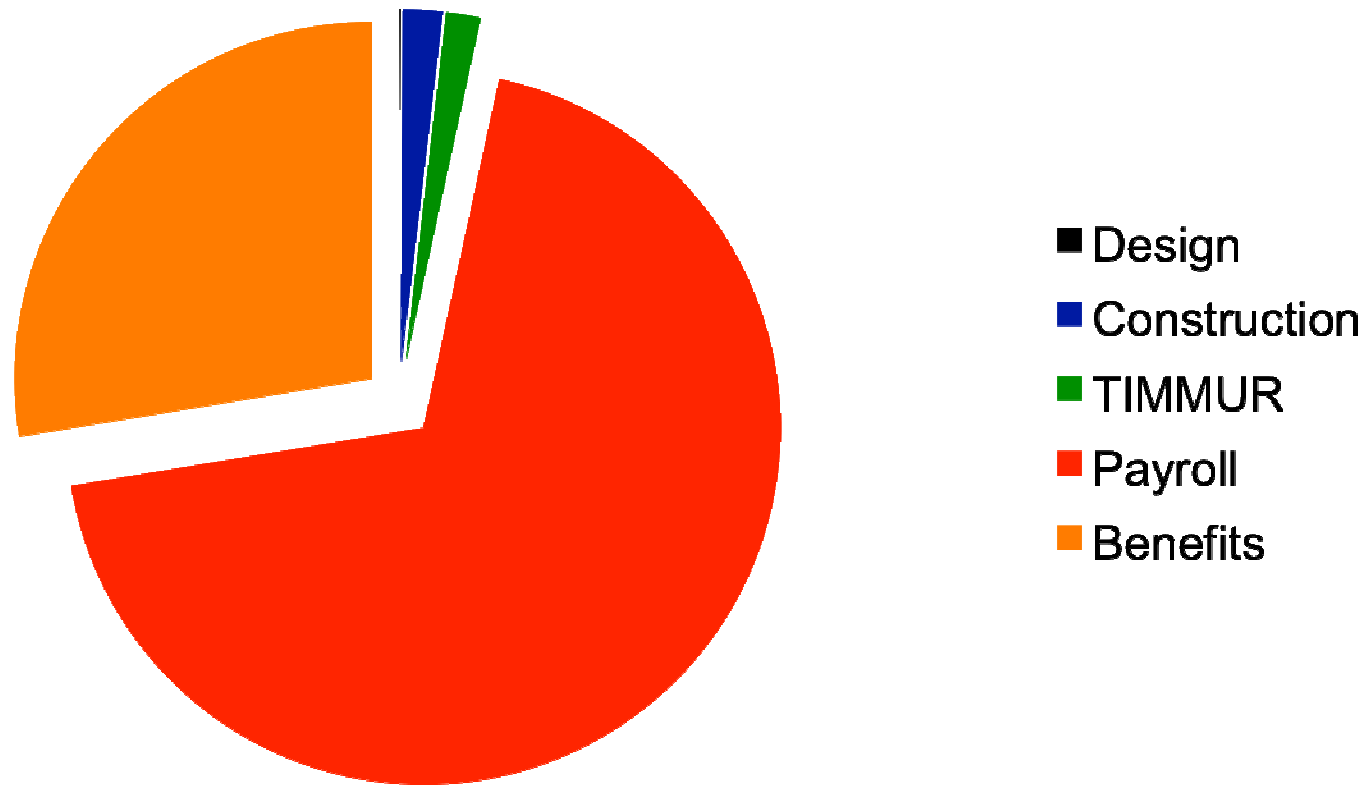
- Owner pays utilities
- Link between capital and expense
- Easier to sell NOE efficiency

## Triple-Net

- Tenant pays utilities
- No connection between capital and expense
- Efficiency is a more difficult sale



# 20-Year Life Cycle Cost



Design and Construction represents 2% to 4% of the life-cycle cost for a commercial building over a 20-year life cycle.





# Financial Benefit / Cost Factors

- Energy expense reduction
- Water expense reduction
- Insurance expense reduction
- Rent premium
- Occupancy increase
- Reduced absenteeism
- Greater productivity
- Marketing & PR
- First cost for upgrades
- Overhead for Programs, Policies, Practices
- Commissioning

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Increased NOI & building value



# Financial Benefit Factors

	Certification Required?
• Energy expense reduction	NO
• Water expense reduction	NO
• Insurance expense reduction	YES
• Rent premium	MAYBE
• Occupancy increase	MAYBE
• Reduced absenteeism	MAYBE
• Greater productivity	MAYBE
• Marketing & PR	MAYBE

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Increased NOI & building value



# Financial Model Differences

- New Construction vs Existing Building
- Owner Occupied vs Rental Property
- Seller's vs Buyer's Market
- Full Service vs Triple-Net



# Financial Model Differences

- New Construction vs **Existing Building**
- Owner Occupied vs Rental Property (**mix**)
- Seller's vs Buyer's Market (**compromise**)
- **Full Service** vs Triple-Net



# Model Criteria

- 50,000sf commercial office
- Existing building considering EBOM
- Evaluated for Energy Star rating feasibility *FIRST!*
- 20,000sf owner occupied, 23,00sf rented full service

\$ 2.40/sf	Energy	10% reduction
\$ 0.50/sf	Water & sewer	20% reduction
\$ 0.50/sf	Insurance	5% reduction
\$32.00/sf	Rent, annual	1% increase
90%	Occupancy	1% increase
\$ 0.35/sf	Commissioning	13% reduction
9%	Cap rate	
6%	Discount rate	
33%	Federal tax rate	



# Proforma Results

\$ 155,800 Total project cost after incentives (mostly energy & water efficiency measures and commissioning)

\$ 300k-\$800k Net Present Value (remember, if NPV > \$0 ... **DO IT!**)

Doesn't include the high, positive NPV for onsite renewable energy.

## **CHALLENGES**

- Increased first cost for new construction, or financing for existing building improvements.
- Cost of commissioning (if seeking LEED certification).



# Incentives

## Energy Efficient Commercial Building Tax Deduction

- Building owner gets up to \$1.80/sf tax deduction
  - Energy efficient envelope, HVAC, lighting
- After-tax cash value of ... *pre-tax benefit x tax rate*
  - 33% Federal tax = \$0.59/sf after-tax cash value
  - Non-profit owners: tax benefits flow to “design” team



# Incentives

State Property Tax Abatement

Utility Energy Efficiency Incentives

Renewable Energy Tax Credits and Rebates

*[www.dsireusa.org](http://www.dsireusa.org)*

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