Quantifying Financial Benefits & Bankability of LEED Projects

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♫ How to Sell it to the Owner
Marc Lopata, PE, LEED AP; Microgrid Energy

♫ How to Sell it to the Bank
Rich Greene; Clarus Advisors
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
• 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
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**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
- \textit{Net Operating Income} = \text{Revenue} – \text{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
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

 Increased NOI & building value

- First cost for upgrades
- Overhead for Programs, Policies, Practices
- Commissioning
Financial Benefit Factors

- 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

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, 23,000sf 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 … \( \text{pre-tax benefit} \times \text{tax rate} \)
  – 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

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