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# ***Going Green in Community Development***

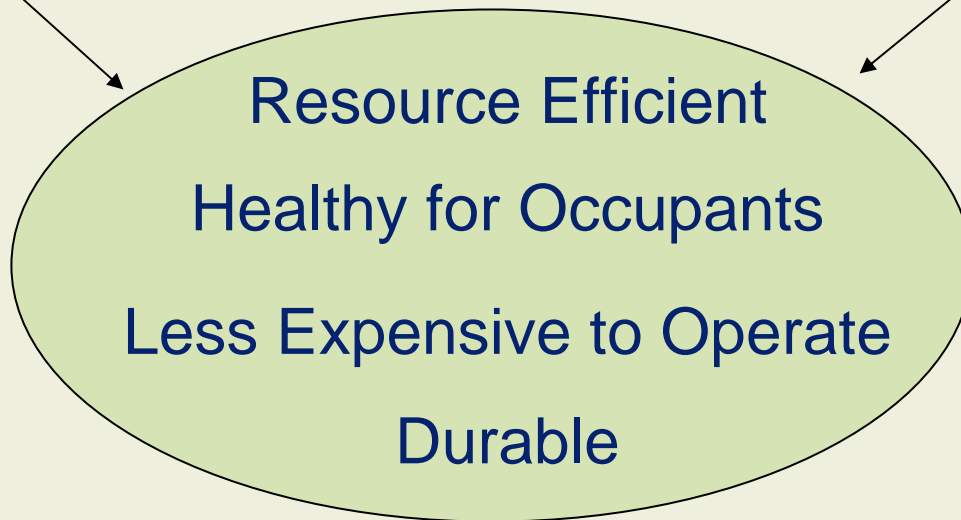
*Madeline Fraser Cook*  
Green Development Center  
Local Initiatives Support Corporation

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# ***What Is Green Affordable Housing?***

**Environmental**

**Financial**



**Social**

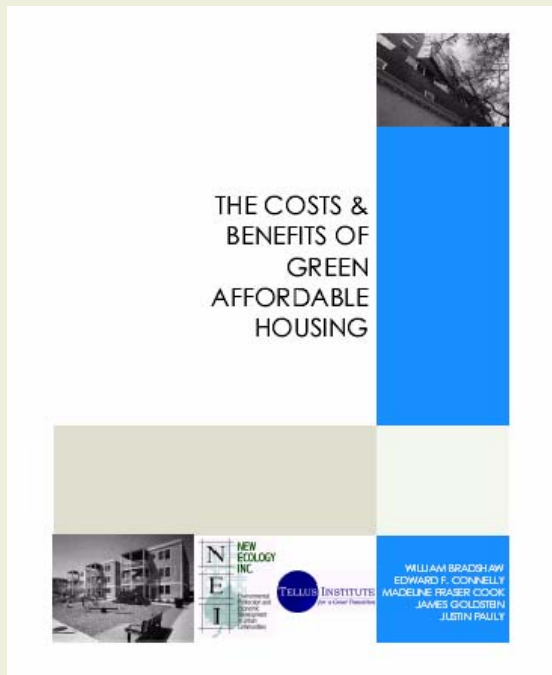
# ***Examples of Programs with New Green Emphasis***

- LIHTC
- HUD's Mark to Market Program
- Local development guidelines
- New state and federal policy

# ***Sustainable Communities***

- Physical environment
- Income and wealth creation
- Economic activity
- Quality education
- Livable, safe and healthy communities

# *What We Know About Greening Affordable Housing*



## Cost of Greening (as % of total construction costs)

Mean: 5.29%

Median: 3.83%

Range: -25% to 38.94%

(11 of 16 cases under 5%)

[www.newecology.org](http://www.newecology.org)

# ***What We Know About Greening Affordable Housing***

For 5% or less, we  
can make buildings  
that:

*Use 30-50% less  
energy than code  
buildings to heat  
and cool*



# ***What We Know About Greening Affordable Housing***

For 5% or less, we can make buildings that:

*Use 20% less electricity*



# ***What We Know About Greening Affordable Housing***

For 5% or less, we can  
make buildings that:

*Are healthier to live in*





# ***What We Know About Greening Affordable Housing***



For 5% or less, we can make buildings that:

*Are quieter, have better lighting and are more comfortable*

# ***What We Know About Greening Affordable Housing***

For 5% or less, we can make buildings that:

*Are more durable*



# ***What We Know About Greening Affordable Housing***



For 5% or less, we can make buildings that:

*Recycle demolition and construction waste*

# ***What We Know About Greening Affordable Housing***

For 5% or less, we can make buildings that:

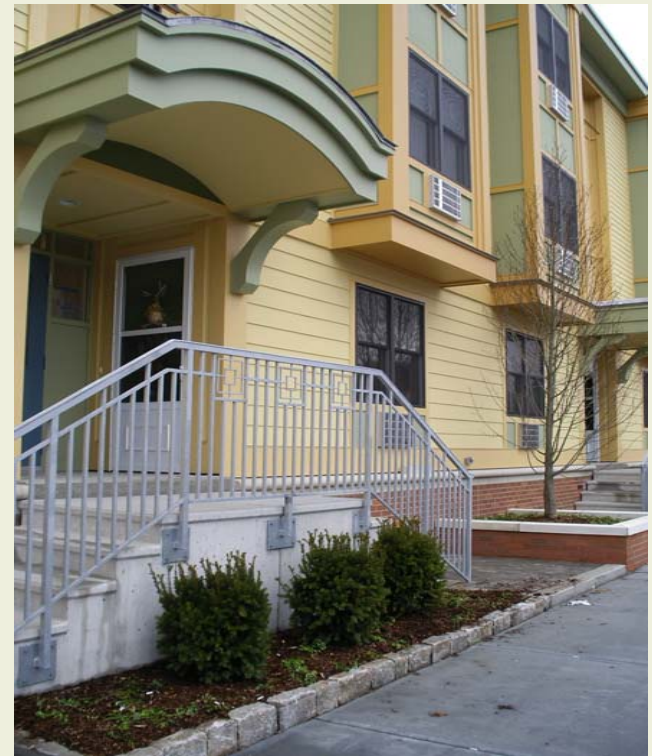
*Use 10-20% less water*



# ***What We Know About Greening Affordable Housing***

For 5% or less, we can make buildings that:

*Use recycled materials in construction*



# ***Importance of Data Collection***

## **Measuring Cost/Benefit:**

### **A. Project Decisions**

- Energy and water conserving
- Healthy, improved IAQ
- Durable
- Siting
- Materials



# *Measuring Cost/Benefit*

B. Global Warming/Environment

C. Operations/Ownership Costs

D. Risk Mitigation



# ***Why Measure Cost/Benefit?***

- Energy Budgets: 25% of operating budget and climbing
  - w/ annual 10% increases: >30% in 5 years
  - w/ annual 20% increases > 40% in 5 years
- Similar for water & sewer in high costs areas



# ***Why Measure Cost/Benefit?***

Mitigate Risk of Rising Operating Costs

- Energy & Water
- Maintenance
- Turnover Expenses
- Owner Costs

Trade uncertain operating costs for more  
predictable costs

# ***Why Measure Cost/Benefit?***

**E. Public Policy**



**F. Financing**



# *How We Measure Cost/Benefit*

- Compare life cycle costs of green building feature versus comparable feature
  - Total development costs
  - Operating costs (utilities, maintenance)
  - Replacement costs
- Consider first costs and life-cycle costs
- Inflates operating costs to account for inflation and cost increases
- Discounts future costs and savings to account for time value of money

# *How We Measure Cost/Benefit*

Need first costs and estimates of operating costs



# *How We Measure Cost/Benefit*

## Sources of Data

- Contractor/Estimator
- Energy Model
- Project Experience
- Vendors



# *How We Measure Cost/Benefit*

## A Note on Assumptions

- Time frame
- Inflation and Cost of Money-Energy Inflation
- Borrowing additional funds to pay for green

# Measurable Aspects of Design

- Energy and Water
- Reduced Maintenance
- Deferred Replacement Costs
- Transportation



# *Measurable Aspects of Design*

## Difficult to Measure

- Health
- Non Project Environmental Benefits
- Community Benefits





# ***Why Doesn't This Happen on Every Project?***

- Inexperience
- Not expected by financiers & regulators
- Failure to “Think Green” Early
- Poor Team Selection
- Key Decisions Made Before Goals Set
- Lack of Integrated Design Approach

# ***What Makes for a Successful Green Project?***

- Develop a vision of the project that combines programmatic purpose, building design and building performance.
- Expect and demand green and other project goals

# Standards

Is there value in a rating?



# ***LISC Green Tools***

- Green Loan Fund for predevelopment
- Green Physical Needs Assessment and Rehab Manual
- Sustainability Roadmap
- Coordination of local trainings

# *Despite the Learning Curve, Green Does Happen...*

Trolley Square, Cambridge, MA



# *Questions & Contact*

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