

# GREEN BUILDING AND ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANTS

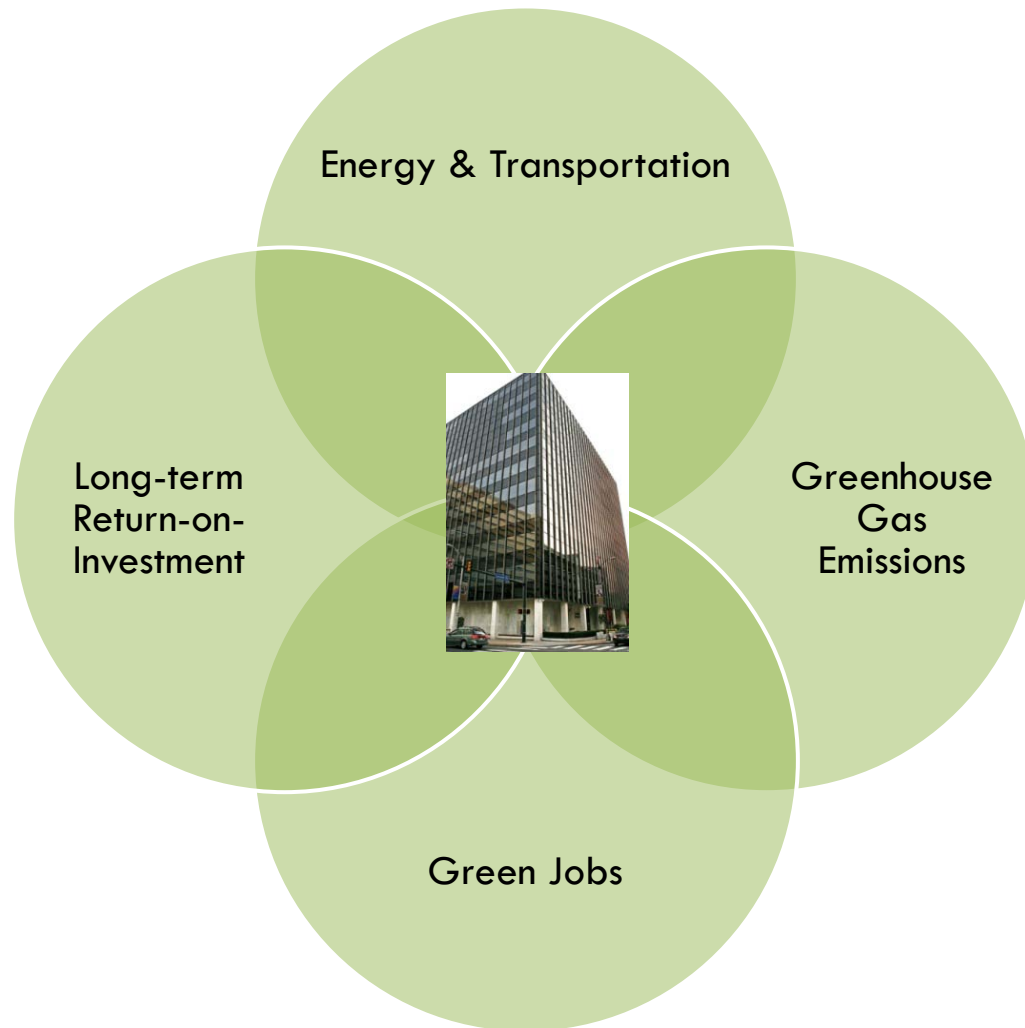


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## Principles

- Prioritize energy efficiency
- Maximize benefits over the longest possible terms, especially linkages with long-term priorities including community economic development, community stabilization, and poverty reduction
- Invest to create and/or retain jobs and stimulate the economy

# Why buildings?



# Why green buildings?

## **Green buildings are proven to cost-effectively:**

- Create and retain green jobs
- Reduce energy use
- Promote clean, renewable energy sources
- Offer long-term benefits from short-term investments

# Why **LEED** buildings?

LEED offers a framework that can guide and expedite project development, including:

- Integrative design processes and energy analysis can help plan to meet multiple goals
- Scorecards and supporting materials help identify and prioritize strategies and maximize co-benefits
- Documentation processes help create the foundation of information need for monitoring and reporting

# Many opportunities

EECBG creates opportunities across the life-cycle of building projects, including:

- Neighborhood Planning & Design
- New Construction
- Existing Building Operations & Maintenance

# Neighborhoods Planning & Design

Planning and program development activities consistent with EECBG principles and goals include:

- Climate Action Plans, Energy Master Plans, and Alternative Transportation Plans
- Green Building Policies and Programs
- Workforce training
- Opportunities for LEED projects include analysis of energy and transportation-related features in LEED-ND projects

# New Construction & Renovation

New construction activities consistent with EECBG principles and goals include:

- Energy modeling and sustainability analysis
- Investments in demand reduction, energy efficiency, renewable energy, and waste reduction
- Investments in metering, monitoring, and enhanced commissioning
- Workforce training

Opportunities for LEED projects include investigation and implementation of E&A and M&R-related strategies

# Existing Building O&M

Operations and maintenance activities consistent with EECBG principles and goals include:

- Facility audits, energy end-use analysis and energy benchmarking
- Investments in sustainable facilities plans, policies, and programs
- Investments in metering, monitoring, and retro-commissioning
- Workforce training

Opportunities for LEED projects include creating the foundation for EB certification, e.g., ENERGY STAR

# EECBG Challenges

## No free lunch

- Act fast
  - EECBG funds should be used quickly while providing long-term benefits
- Create multiple benefits
  - EECBG funds are expected to create multiple benefits
- Monitor results
  - EECBG funds come with substantial performance monitoring and reporting requirements

# Act Fast

Opportunities for action include:

- Expand, enhance, or accelerate neighborhood planning processes (e.g., add or enhance a Climate Action Plan)
- Expand or enhance consideration of energy and renewables for new construction projects
- Create and implement sustainable facilities programs focused on energy and emissions reductions

# Multiple Benefits

Green building's great strength. Investments in the integrative design of green building are consistently shown to provide benefits to:

- Occupants
- Owners
- Society
- Local and Global Environment

# Monitoring & Reporting

Opportunities and challenges for green building:

- LEED is based a foundation of information about building design and performance
  - ▣ Modeling, commissioning, performance monitoring, energy benchmarking
- However, monitoring and verification strategies are underutilized across LEED rating systems
- EECBG provides an unprecedented opportunity to scale-up performance monitoring and reporting across the life-cycle of built environments

# Monitor What?

EECBG resources require quarterly and annual report on key performance metrics including:

- Jobs created and/or retained
- Energy savings per dollar invested
- Renewable energy capacity installed
- Funds leveraged
- Cost savings

Reports may be published on the Internet and subject to review by Inspectors General and the Government Accountability Office

# Example

An 80,000-sf school may propose using EECSBG funds to enhance a school retrofit:

Energy simulation & life-cycle assessment

Updates to HVAC, lighting, sub-metering

On-site renewable energy

Enhanced commissioning, monitoring & verification



# Results & Reporting

The 80,000-sf green school retrofit results in:



**Jobs**

**Costs**

**Carbon**

# Take Home Messages

- EECBG and USGBC share common goals and principles
- EECBG resources provide the opportunity to advance and enhance green building activities
- Green building strategies can provide the targeted benefits and potential solutions to new requirements associated with new resources



# Questions

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