# 2017 Green Building Case Studies and Green Building Historic Preservation
## Request for Applications (RFA)
### Informational Call
#### January 9, 2017

**Participants:** The following call participants requested that their names, organizations and contact information be listed by emailing greenbuildingrfa.grants@dc.gov

<table>
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<tr>
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<th>Organization</th>
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1. **Question:** In regards to the green building case studies, are you looking for complete buildings or buildings that are underway/under construction?

**Answer:** We are most interested in complete buildings so the case studies can examine development costs, building performance data, and any operational savings.

2. **Question:** In regards to the green building case studies, is the Department of Energy and Environment (DOEE) interested in the buildings only in the District of Columbia?

**Answer:** Yes, for the specific green building case studies we are only interested in buildings within the District. For the report demonstrating the financial value proposition for operating green buildings, we would consider a regional analysis, but would prefer to focus on an analysis on buildings in the District.

3. **Question:** In regards to the green building case studies, is the Department of Energy and Environment (DOEE) interested in the buildings only or the larger site?

**Answer:** For this grant, we are seeking green building case studies. The case studies can describe the larger site attributes in terms of stormwater management, resilience, or on-site renewables/water systems. If there is an element at the site level that benefits the building and its occupants, then that can be explored in the case study.

4. **Question:** In regards to the green building case studies, you mentioned that you were interested building performance data and operational savings. This information can be difficult to obtain and may be costly to access. Can you clarify?

**Answer:** There are two different case study outputs. For the building level case studies, we would like for building performance data to be an element of the case studies. We recognize this may be challenging. You should outline in your application the elements and metrics that you will have access to for the case studies.
The second output related to the green building case studies is a report demonstrating the financial value proposition for operating green buildings in the District. This may include metrics such as lower vacancy rates and improved cash flows. The last analysis like this that was specific to the District was completed in 2012. It is not available online so we will include it along with the notes from this call as an example document. Please note that this is an example only. Please propose your approach to this output in your application.

5. **Question:** Related to green building case studies, can you clarify if we should expect to identify the buildings in our proposal?

**Answer:** In your proposal, you do not need to generate a list of specific buildings you propose for the case studies, unless you have specific building in mind. During the work planning process, which is after the grantee is selected, the grantee will proposal a potential list of projects and we will work with a selected team to determine what the case studies will be. You should outline the approach to get building-level information in your proposal.

6. **Question:** Eastern Market is a Historic District and there are historic properties here. There has been recent development in a historic neighborhood and restoration of historic structures. In terms of the guidelines are you looking for proposing retrofit guidelines that align with green building principals, techniques? Furthermore, are you looking for real world examples of historic properties that have had a deep green renovation or are you simply looking for guidelines?

**Answer:** Applicants need to demonstrate that they have substantial knowledge and experience in historic preservation in the District. We are looking for technical guidance for architects and developers on how to achieve deep green building and historic preservation in projects. In addition to the guidelines, there are two other accompanying tools, outlined on page 23 of the RFA. It is not inconceivable that the outreach tools may include some real world examples, but that would be based on the approach recommended by the applicant.

7. **Question:** This question in in regards to potential partnerships. It mentions in some of the RFA materials that if you are going to partner with a public school that you need to have permission from the principal of the school. Is this encouragement to partner with a public school, or is this only applicable if we were going to partner with a school?

**Answer:** There is not requirement to partner with a public school, nor is this a part of the scoring criteria.

8. **Question:** In terms of partnership, has any thought been given to collaboration with the Advisory Neighborhood Commission (ANC)?

**Answer:** There has been no specific outreach to the ANCs regarding this RFA. The case studies and green building historic preservation guidelines and outreach materials may be good tools for the ANCs to use.
In terms of partnership, a reminder that following this call we will post a list of call participants to assist in connecting interested parties.

9. **Question:** Regarding the green building case studies, some developers/companies may wish to not be identified. How would that be addressed?

   **Answer:** You may propose anonymous/archetype case studies but would need to describe that approach in your application.

10. **Question:** I have a question on the budget. I did not see overhead as an allowable cost. Can you say more about this? I am from a university and indirect (Financial and Administrative Costs) are set by OMB and are standard rates.

   **Answer:** This is no guidance on how much you should charge to overhead. Reviewers will look at your budget and narrative and consider how it is justified as it pertains to your activities. Your budget narrative should be in alignment with the costs associated in your budget. An adequate and reasonable budget and justification for the funds requested is allocated a maximum of 10 points in the Scoring Criteria. For more information on the Scoring Criteria, see page 25 of the RFA. This is a competitive process, and there are many factors as part of the Scoring Criteria.

11. **Question:** Will any additional preference points for Certified Business Entities?

   **Answer:** For information on preference points for applicants with an active District-based business or District-based partner see Section 4.2, page 16, and the Scoring Criteria, page 25, of the RFA.

12. **Question:** There are two different outputs for this grant, green building case studies and green building historic preservation guidelines. Why were they included as one project?

   **Answer:** Although there are two different outputs for this grant, both outputs require a strong foundation in green building design and construction strategies and local green building regulations and codes. For many Green Building Fund grants we encourage a team-based approach. For more information see page 22 of the RFA.

13. **Question:** Are the applications intended to be of an appropriate scale to fulfill the total Project Amount or are several projects of lesser budget amounts to be awarded?
Answer: The applicant must propose how to accomplish the project, Green Building Case Studies and Historic Preservation Guidelines, inclusive of all project outcomes and outputs, referenced on page 23-24 of the RFA, in a single application.
Appendix A.

The following document is included in reference to Question 4. on page 2-3 of this Q&A document. Please note that this is an example only. Please propose your approach to this output in your application.
Federal, State, & Local Governments Requiring Green Leases

The State of California leases millions of square feet of office space from commercial real estate agents. The Governor’s Green Building Initiative requires the Department of General Services and other agencies to negotiate green leases for the projects they are responsible for. Green leases are cost-effective, leases for spaces of 5,000 square feet or more in a building, and they reduce energy costs.

The green leasing policy takes effect in 2006 for new leases, and in 2008 for lease renewals. Current lessees and potential lessees have been notified that the State of California will require the use of green leases in all future leases.

Current lessees, and those who are about to negotiate leases, should take a closer look at their lease agreements before signing. The use of green leases will help reduce energy costs and improve the environment.
We Peered and Compared Each Green Building
We Peered and Compared Each Green Building

Begin with 991 Energy Star buildings. Ten step process:

1. Energy Star buildings peered to buildings with same submarket, same class, an RBA of 1/4 to 4x the Energy Star RBA, and # stories of 1/4 to 4x the Energy Star stories. 392 Peered.

2. For those not peered, repeated the same criteria above, except used a 5 mile radius instead of same submarket.

3. For those still not peered, used the criteria from #1 above, but dropped the RBA/#Stories requirement and added that the tenancy be the same and the year built be + or - 10 years.

4. For those still not peered, repeated the same criteria above, except used a 5 mile radius instead of same submarket.
We Peered and Compared Each Green Building

5. For those still not peered, used the criteria from #3 above, but dropped the year built requirement.

6. For those still not peered, repeated the same criteria above, except used a 5 mile radius instead of same submarket.

7. For those still not peered, used only same submarket and same class as the criteria.

8. For those still not peered, used only 5 mile radius and same class as the criteria.

9. For those still not peered, used only same submarket as the criteria.

10. For those still not peered, used only 5 mile radius as the criteria. All Energy Star buildings now peered.
Occupancy Rates
National

Advantage = 360 Basis Points
Direct Rental Rates National

Difference = $2.40
Direct Rental Rates
National For Energy Star

2008 1q 2007 4q 2007 3q 2007 2q 2007 1q 2006 4q 2006 3q 2006 2q 2006 1q

Energy Star  Non-Energy Star

$32 $30 $31 $28 $29 $26 $27 $24 $25 $28 $29 $26 $27 $24 $25

CoStar Group
Real Estate Information
Occupancy Rates
Washington DC – Energy Star

Advantage = 630 Basis Points

Non-Energy Star

Energy Star

2006 1q

2008 1q

96.6% 91.4%

97.1% 90.8%
Occupancy Rates - Washington DC Energy Star

![Graph showing occupancy rates over time for Energy Star and Non-Energy Star properties. The Energy Star properties show a higher occupancy rate overall, with slight fluctuations, while the Non-Energy Star properties exhibit more variability. The graph spans from 2006 1q to 2008 1q, with percentages ranging from 89% to 99%.]
Direct Rental Rates
Washington DC – Energy Star

Difference = $2.98 per sq./ft.
Direct Rental Rates
Washington DC – Energy Star

- Energy Star
- Non-Energy Star
Sales Price / Square Foot – Energy Star Buildings Nationally

Advantage = $61 per sq./ft.
At 1/10 a of Cent per Foot – Get a New Filter
All Peers used for LEED were built post 2001
Occupancy Rates
National - LEED Rated Buildings

<table>
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<th>Non-LEED</th>
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<td>2006 1q</td>
<td>91.1%</td>
<td>88.3%</td>
<td>2.8%</td>
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<tr>
<td>2008 1q</td>
<td>92.0%</td>
<td>87.9%</td>
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Difference = 410 Basis Points
Direct Rental Rates
National - LEED Rated Buildings

Difference = $11.33 per sq./ft.

2006 1q:
- Non-LEED: $33.69
- LEED: $33.69

2008 1q:
- Non-LEED: $31.05
- LEED: $42.38

Difference = $11.33 per sq./ft.
Direct Rental Rates
National - LEED Rated Buildings

LEED
Non-LEED

$26  $31  $36  $41  $46

2006 2q  2006 3q  2006 4q  2007 1q  2007 2q  2007 3q  2007 4q  2008 1q
Occupancy Rates Washington DC

Difference = -716 Basis Points

Difference = 75 Basis Points
Direct Rental Rates Washington DC

- **Non-LEED**:
  - 2006 1q: $39.28
  - 2008 1q: $40.97

- **LEED**:
  - 2006 1q: $40.35
  - 2008 1q: $48.63

**Advantage** = $7.66 per sq./ft.

**Diff** = -266 Basis Points
Sales Price / Square Foot – LEED Rated Buildings Nationally

$50
$48
$46
$44
$42
$40
$38
$36

Non-LEED

LEED

Difference = $171 per sq.ft.

$438
$267
Building Green Costs 2%-7% More

Extra Costs in Percentage to Build Green

Source: USGBC
Sales price per square foot as the dependent variable the following model was tested:

\[
\text{Sales Price/Sq Ft} = \alpha + \beta_1(\text{Age}) + \beta_2(\text{ES}) + \beta_3(\text{LEED}) + \beta_4(\text{Size}) + \beta_5(\text{CBD}) + \beta_6(\text{Yr dummy}) + \beta_7(\text{City Dummy}) + \varepsilon
\]

Where \(\alpha\) is the constant, \(\beta\) is the regression coefficient for each variable and \(\varepsilon\) is the error or residual term.

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Source Dr. Norm Miller

* Significant at the 85% level
** Significant at the 95% level or above
Testing Results in Hedonic Model

Interestingly, the correlation between LEED and Energy Star in this data base is -.064 so we are fairly sure that these effects do not contain any multicolinearity. When the variables were tested independently the coefficients barely moved. Thus, it appears in this data set and based on 2003-2007 data the benefits from LEED certification and Energy Star investment are cumulative.
Summary

- Green buildings achieve higher rents
- Green buildings achieve higher occupancy
- Green buildings have lower operating costs
- Green buildings achieve higher prices per square foot
- Non-green buildings are going to become obsolete
- Developing, operating, & leasing green is the right thing to do