GSA National Deep Energy Retrofit Program

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Real Property Backlogs
2007 GAO Report

Federal Real Property is a “High Risk”
Addressing Real Property Backlogs and Energy Efficiency

2009 GAO Report

Multiple Benefits from Infrastructure Investments, Including Reductions in Energy Consumption

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GSA’s Portfolio

19th & EARLY 20th CENTURY
1810-1928

GREAT DEPRESSION
1929-1940

WAR YEARS
1941-1945

POST WAR & MODERN ERA
1946-1979

POST MODERN ERA
1980-1993

DESIGN EXCELLENCE
1994-PRESENT

+ SUSTAINABLE DESIGN
2003: LEED POLICY

<table>
<thead>
<tr>
<th>GPs</th>
<th>8</th>
<th>39</th>
<th>3</th>
<th>72</th>
<th>14</th>
<th>22</th>
<th>68</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million Ft²</td>
<td>22</td>
<td>20.1</td>
<td>16.5</td>
<td>53.1</td>
<td>20.1</td>
<td>51.3</td>
<td></td>
</tr>
<tr>
<td>Buildings</td>
<td>195</td>
<td>178</td>
<td>146</td>
<td>470</td>
<td>178</td>
<td>454</td>
<td></td>
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</tbody>
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• 8,800 Owned or Leased Assets
  • 230 Million Square Feet Owned
  • 189 Million Square Feet Leased
• 1.1 Million People
• Replacement Value: $70 Billion
• Revenue: $9.8 Billion/Year
• Capital Budget 2016: $816 Million
• Infrastructure Backlog: $4.95 Billion
  • $650 Million in “Energy” Projects
DER Critical to GSA Success in Sustainability

- GSA’s Building Portfolio Averages 16% More Energy Efficient Than Private Sector and Ranks
  - Portfolio Performance Ranked 3rd Among All Other U.S. Office Portfolios (GRESB)
- GSA Commitment: 73% Reduction in GHGs by FY2025 (From 2008 Levels)
- 100% Renewable Electricity by FY2025
- National Deep Energy Retrofit
  - Phase I: Average Energy Savings Increased from 18% to 38%
  - Phase II: GSA Will Award $169.5 M in additional ESPC Contracts in FY2016

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Value Beyond Energy Savings
Improves the Asset

<table>
<thead>
<tr>
<th>POTENTIAL VALUE BEYOND ENERGY COST SAVINGS</th>
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<tbody>
<tr>
<td><strong>Maintenance Costs</strong></td>
<td></td>
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<tr>
<td>Pacific Northwest National Laboratory (2008);</td>
<td></td>
</tr>
<tr>
<td>Leonardo Academy (2008); Aberdeen Group (2010)</td>
<td>9.0-14%</td>
</tr>
<tr>
<td><strong>Occupant Satisfaction</strong></td>
<td></td>
</tr>
<tr>
<td>GSA (2011)</td>
<td>27-76%</td>
</tr>
<tr>
<td><strong>Rental Premium</strong></td>
<td></td>
</tr>
<tr>
<td>Eicholtz, Kok &amp; Quigley (2010); Fuerst &amp; McAllister (2011); Eicholtz, Kok, et al. (2011); Newell, Kok, et al. (2011); Miller, Morris &amp; Kok (2011); Pogue et al. (2011); McGraw Hill/Siemens (2012)</td>
<td>2.1-17%</td>
</tr>
<tr>
<td><strong>Occupancy Premium</strong></td>
<td></td>
</tr>
<tr>
<td>Wiley et al. (2010); Pogue et al. (2011); McGraw Hill/Siemens (2012)</td>
<td>3.14-18%</td>
</tr>
</tbody>
</table>

| Property Sale Price Premium                         |                |
| Eicholtz, Kok & Quigley (2010); Fuerst & McAllister (2011); Eicholtz, Kok, et al. (2011); Newell, Kok, et al. (2011) | 11.1-26%       |

| Employee Productivity                               |                |
| Lawrence Berkeley National Laboratory              | 1.0-10%        |

| Employee Sick Days                                  |                |
| Miller, Pogue, Gough & Davis (2009); Cushman & Wakefield et al. (2009); Dunckley (2007); City of Seattle (2005); Romm & Browning (1995) | 0-40%          |

* Information courtesy of Rocky Mountain Institute’s Deep Retrofit Value Practice Guide.
• Energy Savings from GSA’s National Deep Energy Retrofit Program
  – Http://www.gsa.gov/portal/mediaId/198447/fileName/NDEREnergySavingsReport5.action

• Deep Energy Retrofits Using Energy Savings Performance Contracts: Success Stories
• Kevin Kampschroer
  – Kevin.Kampschroer@gsa.gov
  – GSA.gov/sustainability
  – SFTool.gov
  – Whitehouse.gov/administration/eop/ceq