



U.S. House of Representatives
Committee on Transportation and Infrastructure

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SUMMARY OF SUBJECT MATTER

TO: Members of the Subcommittee on Economic Development, Public Buildings, and Emergency Management

FROM: Subcommittee on Economic Development, Public Buildings, and Emergency Management Staff

SUBJECT: Hearing on "First in a Series: Greening Washington and the National Capital Region"

PURPOSE OF THE HEARING

On Thursday, April 17, 2008, at 10:00 a.m., in room 2167 of the Rayburn House Office Building, the Subcommittee on Economic Development, Public Buildings, and Emergency Management will hold a hearing on greening initiatives for Washington D.C. and the National Capital Region.

BACKGROUND

Current trends and future initiatives regarding facility management increasingly include concepts of sustainability and how "green" buildings contribute to sustainability. These concepts are quickly becoming fundamental requirements for both the facility owner and the facility tenant. Although there are many definitions of sustainability, all contain the notion of environmental balance and the goal of meeting present needs without jeopardizing the ability to meet future requirements. The goal is no net loss. Sustainability applies not only to the built environment but also to a variety of systems such as water systems, ecosystems, agriculture systems, and energy. Green buildings generally refer to buildings designed and built in such a way that they adhere to the tenets of sustainability. All aspects of the building process, including construction, renovation, alteration, operation, and maintenance include actions that can produce a green building.

Although it is difficult to precisely measure sustainability, various facility rating systems such as Leadership in Energy and Environmental Design ("LEED"), Energy Star, and Green Globes have been developed and can help make the case for a building's sustainability rating through rating

the building's green aspects. Such things as site selection, distance from public transportation, bicycle storage, other alternative modes of transportation, stormwater run off, roof surfacing, natural light, commissioning, energy performance and energy consumption, building recycling and reuse, indoor air quality, mechanical, electrical, and plumbing systems, and noise control are just some of the items that are given points which are then used in a rating system to determine if a building is green. In addition, life cycle costing is a vital consideration in determining if a building is green.

There are several local examples of facilities that have achieved a high green building rating. Nationals Park is the first stadium in the United States to be certified by the U.S. Green Building Council using its LEED rating system, achieving a LEED Silver rating. The LEED rating system represents benchmarks for design, construction, and operations of green buildings. Nationals Park stadium includes a 6,300-square-foot green roof to help absorb water and reduce runoff into the Anacostia River, the use of recycled materials in construction, low-flow plumbing, green light fixtures, bike racks, and preferential parking for high mileage features. The construction of the stadium in close proximity to public transit also contributes to the Nationals stadium being considered a Silver-rated, green building.

In addition, the Federal Government's sustainable specifications for the U.S. Department of Transportation ("DOT"), located at the Southeast Federal Center, produced one of the largest green roofs on the East Coast. The design received an award from the Chesapeake Bay Foundation. The roof covers more than 68,000 square feet. The building's location, 400 feet from the Navy Yard metro stop (green line) and along a major Metrobus route, is also one of the most significant sustainable features of the project. The building also includes bicycle storage and changing rooms to accommodate alternative transportation methods.

Regarding energy savings, the DOT headquarters building contains several energy saving systems. According to DOT facility managers, these systems include:

- Fan motors and pumping systems for heating and cooling that automatically adjust fan speed to ambient conditions.
- Variable Air Volume ("VAV") systems that automatically adjust air flow in reaction to heating and cooling requirements.
- Heating, Ventilation and Air Conditioning ("HVAC") systems configured to support an open-closed office space ratio of 70-30.
- Boilers with natural gas as the primary fuel and as backup fuel source. This allows flexibility to manage energy use.
- A state-of-the-art Building Automation System ("BAS") with a web interface. The BAS controls help to efficiently modulate the building systems to meet differing seasonal and occupancy loads.

These systems reduce energy consumption by 15 to 30 percent over traditional systems. Additionally, through mandatory lease requirements, the project includes a fundamental commissioning process to ensure that the building systems' performances are optimized.

In addition to energy performance measures, the building also contains interior "green" finishes, which include carpeting and ceiling materials for the office areas that have a recycled content. There is more than one million square feet of carpeting and ceiling materials for the project, which is an area equal to the size of 17 football fields. All workstations panel fabrics have recycled content and all wood panel veneering is Forest Stewardship Council ("FSC") certified.

Finally, in addition to the points that have already been identified, 100 percent of the electricity consumed by the DOT headquarters building is contracted with PEPCO Energy from renewable/green sources (wind, solar, landfill gas, etc.). Given that the Office of Management and Budget denied the agency's request for funding for a LEED certification, the building does not have a LEED rating.

In 2007, the Sidwell Friends Middle School, located in Northwest Washington, received a top green award from the American Institute of Architects. Award features included bicycle storage, public transportation access, passive solar design, and a green roof.

PRIOR LEGISLATIVE AND OVERSIGHT ACTIVITY

The Subcommittee has not previously held a hearing specifically on sustainability and green buildings. However, on May 11, 2007, the Committee on Transportation and Infrastructure held a hearing on "Administration Proposals on Climate Change and Energy Independence". Acting Architect of the Capitol Stephen Ayers and Chief Administrative Office Daniel Beard testified at this hearing regarding energy efficiency and climate change mitigation initiatives in the Capitol Complex.

On June 20, 2007, the Committee on Transportation and Infrastructure ordered reported H.R. 2701, the "Transportation Energy Security and Climate Change Mitigation Act of 2007". The bill included several provisions to promote energy efficiency of the U.S. Capitol Complex and in federal buildings under the jurisdiction, custody, and control of the General Services Administration. These provisions were incorporated into P.L. 110-140, the "Energy Independence and Security Act of 2007". Sections 431 through 441 are devoted to High Performance Federal Green Buildings. Section 436 specifically directs the Administrator of General Services to establish in GSA an Office of Federal High Performance Green Buildings.

On April 1, 2008, the Subcommittee on Economic Development, Public Buildings, and Emergency Management held a hearing on the Capitol Complex Master Plan and the Capitol Visitor Center, with a focus on transportation, security, greening initiatives, energy, and maintenance. The Architect of the Capitol's Master Plan contains a sustainability component that calls for implementing sustainable operations practices and procedures to reduce the environmental and carbon footprint of the Capitol Complex. The Plan calls for the use of renewable and alternative forms of energy like photovoltaic, wind power, and fuel cells. In addition, the Plan would create and implement policies to encourage green purchasing. The Sustainability Framework Plan also calls for energy, water, and waste audits for the facilities of the Capitol Complex to promote efficiency while also pursuing cleaner sources of fuel to reduce the Capitol Complex contribution to air pollution in the Washington, DC metropolitan area.

WITNESSES

Mr. Doug Siglin
Federal Affairs Director
Chesapeake Bay Foundation

Mr. David Winstead
Commissioner
Public Building Service
General Services Administration

Mr. George S. Hawkins
Director
District Department of the Environment
District of Columbia

Ms. Joan Kelsch
Environmental Planner
Department of Environmental Service
Arlington County

Mr. Robert Shovan
Apartment and Office Building Association of Metropolitan Washington (AOBA)