



Testimony of Ellen Larson Vaughan

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Subcommittee on Government Management, Organization, and  
Procurement

*Green Building Practices in the Public Sector: Progress and Challenges to  
Date*

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## Shades of Green Building

ENERGY EFFICIENT

Integration and optimization of energy-  
and water-saving technologies,  
building envelope and design strategies

GREEN

Energy Efficient plus:  
Renewable energy use  
Indoor and outdoor environmental quality,  
Resource-efficient, nontoxic materials  
Waste reduction, reuse and recycling

HIGH PERFORMANCE

Green plus:  
Net-zero energy, Small carbon footprint, Functional, Accessible,  
Durable, Optimized O&M, Cost Effective, Productive,  
Safe, Secure, Historic, Aesthetic

	Legal Framework	Resources
High Performance Buildings	EISA '07 Definition EPACT '05 Sec. 914	WBDG, SBIC, NIBS, HPBCC/C, International standards Passivhaus and Minergie (super EE + IAQ), DOE Zero-Net-Energy Buildings Initiative
Green Buildings	Federal and State statutory requirements, voluntary programs	Rating & certification programs, Design guidance, model code (new), Materials analysis and certification, Training, Consultants, Case studies
Energy Efficient Buildings	Federal and State statutory requirements, voluntary programs	Model & stretch codes, Appliance & equipment efficiency standards (mandatory & voluntary), Modeling & analysis tools

Evolution of Better Buildings, Progress in Federal Buildings	
High Performance Buildings	<ul style="list-style-type: none"> <li>• New GSA Office of High Performance Green Buildings and Federal Director to coordinate among agencies and White House</li> <li>• Oklahoma City, Ports of Entry (border stations), DHS, State</li> <li>• FEMP guidance on GHG reduction: GSA goal of Zero Environmental Footprint, led by Chief Greening Officer</li> <li>• DOE Proposed Rule in 2010 – Requirements for sustainable design and identification of green building certification system</li> <li>• FEMP – ESPCs for energy efficiency and renewable energy</li> <li>• Interagency Sustainability Working Group</li> <li>• LEED-certified buildings, green retrofits, transportation issues</li> <li>• DOE Final Rule in 2007 – Requirements for 30% energy efficiency improvement in new federal buildings</li> <li>• Retrofit projects</li> </ul>
Green Buildings	
Energy Efficient Buildings	

## Achieving High Performance Federal Buildings Requires...

- Government-wide building performance requirements and goals, metrics for minimum and higher levels
- Leadership - Holistic planning, life-cycle budgeting and appropriations, cross-program coordination to maximize efficiency and verify performance
- Clear and consistent design/procurement guidance and communication
- Integrated team approach and other best practices
- User-friendly tools for energy modeling and integrated design, data access, file sharing, performance measurement and analysis

## Action Opportunities: Congress

Enable federal government buildings to **LEAD BY EXAMPLE**:

- Set minimum performance requirements
- Provide funding for cross-agency training; adoption, testing and demonstration of innovative technology; performance monitoring, evaluation and verification; information dissemination
- Provide funding for long-term, federal "whole building" R&D and industry development of high-performance building standards
- Help define, differentiate and communicate leadership and coordination roles for the Federal Director, FEMP Director, others
- Use GAO studies to increase/maintain focus on high performance
- Establish policies for assessing life-cycle cost of energy sources and development in terms of economic, environmental, and social impact
- Simplify reporting requirements; enable program readjustments

## Action Opportunities: Federal Agencies

- Update Executive and Departmental Orders dealing with buildings to reflect high-performance requirements and goals
- Require high-performance building expertise, technologies, products and materials in RFQs and Procurement Specifications
- Incorporate high-performance principles into zero-energy building programs; Reconsider delay of fossil-fuel use rulemaking (DOE)
- Utilize best practices in planning, design, construction and operations; focus training on whole-building design
- Demonstrate and disseminate high-performance strategies and results

**LEAD BY EXAMPLE . . . STIMULATE MARKET . . . START  
REVOLUTION IN BUILDING INDUSTRY**