Lack of Clear Federal Policy

Policy direction is needed to further encourage and/or require agencies to implement green building as Federal policy; promulgate standards and measurement systems to guide their efforts; and direct agencies to resources and assistance. As previously outlined, there is a mixture of diverse Federal green building mandates in law, regulation, and Executive Orders, but not one definitive, clear, and unified policy statement on environmental design.

Uncoordinated Messages. As some interviewees pointed out, the uncoordinated, narrowly-focused messages from individual agencies and their offices and divisions can be damaging. Buildings staff can be confused and irritated by what comes across as a "flavor of the month" approach—e.g., today agencies promote the use of compact fluorescent light bulbs, tomorrow concrete containing fly ash, the next day green roofs—without any guidance on how these diverse elements interact or which should take precedence. Unfortunately, the overall effect can be to cause these various messages to become discredited in the eyes of their intended audiences, leading to inaction.

For example, although EPA has numerous programs that touch on many aspects of green building—energy, water, waste, indoor air, smart growth, and brownfields redevelopment (See Table 2), only recently has a cross-agency, multi-media green building working group been formed. This coordinated effort hopefully will allow agency programs to share common goals, measurement tools, standards, and outreach materials, leading to a more unified green building message from EPA.

Consistent and robust rating systems and other metrics are needed to provide a larger framework in which to organize and implement green building programs at the Federal level. The use of standards fits well in the government context, considering the Federal government's massive size, hierarchical structure, and typical way of doing business. The use of standards will also make the job of implementation easier, reducing the duplication of background research by the many parties working on green building, and giving an official stamp of approval to justify environmental design and construction work. As such, the National Technology Transfer and Advancement Act (NTTAA) requires Federal agencies to "use technical standards that are developed or adopted by voluntary consensus standards bodies" unless such use is inconsistent with applicable law or otherwise impractical.[60] Under OMB Circular A-119, agencies can also use other technical standards in cases where no voluntary consensus standards exist.[61]

Unfortunately, the major voluntary consensus standard developing organizations, such as the American Society for Testing and Materials (ASTM International) and the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), provide

[60]See the text of the Act at <**http://ts.nist.gov/ts/htdocs/210/nttaa/113.htm**>.
[61]See NIST's NTTAA website at <**http://ts.nist.gov/ts/htdocs/210/nttaa/nttaa.htm**> for further information on the Act and the OMB Circular.

few green building standards today; however, both of these organizations are doing more and more valuable work in this area.[62]

As previously mentioned, in the absence of a single, unified Federal policy on green building, many agencies are encouraging or mandating the use of the USGBC LEED™ rating system as a checklist to guide the design and construction processes. Others are mandating some portion of their new construction and major renovation to obtain LEED™ certification. In addition to standards or a systematic approach for new construction, the Federal government also needs standards to green its existing building inventory and many leased facilities. Hence, several agencies are participating in the LEED™ for Existing Buildings[63] and Commercial Interiors[64] pilot programs, and GSA worked with an interagency task force to develop model green lease provisions.

Although LEED™ is flexible enough for many agencies to use, some Federal and industry contacts have raised concerns about a government-wide endorsement of the LEED™ rating system. First, although there is value in certification by a third party (e.g., public recognition and contractor compliance assurance), there are incremental costs associated with registration and certification above and beyond the costs to meet LEED™ requirements. Agencies cannot always justify this expense. Second, although USGBC has a consensus process in place to resolve members' comments on the rating systems, trade associations are not allowed to become members, and some members complain they are not able to fully participate in the development of the rating systems. Third, the Federal government may have unique needs beyond the scope of LEED™. Accordingly, the Army used LEED™ as a model and through a Memorandum of Understanding with the USGBC has created its own system, the Sustainable Project Rating Tool, or "SPiRiT," in order to add features such as O&M and flexibility in design

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[62]Within ASTM, much of this work is occurring in Committee E6 "Performance of Buildings" Subcommittee E6.71 "Sustainability." See <**http://www.astm.org**> and go to "Technical Committees." This Subcommittee recently sponsored the publication of a CD-ROM compendium of 127 ASTM standards that address some aspect of green building.
See <**http://www.astm.org/cgi-bin/SoftCart.exe/BOOKSTORE/COMPS/97.htm?L+mystore+etdu1383**>
Within ASHRAE, the Board of Directors and members of the Technology Council have committed to a number of goals for the future. ASHRAE is producing a design guide in conjunction with the New Building Institute (NBI) to achieve 30 percent savings over ASHRAE 90.1-- Energy Code for Commercial and High-Rise Residential Buildings. Within two to three years, the organization will partner with the Illumination Engineering Society of North America (IESNA) and American Institute of Architects (AIA) to develop a design document for achieving a 50 percent savings over the savings achieved as a result of the 90.1 standard. The document will require new calculation methods, research, education, new materials applications, and new types of measuring metrics. Within five years, ASHRAE hopes to develop a guide for achieving 70 percent savings over standard 90.1. In addition, ASHRAE intends to create three documents to meet the specific needs of buildings of various sizes. Whereas ASHRAE 90.1 is a one-size fits all standard, a separate standard will be developed for buildings up to 20,000 square feet in size (which encompasses 70 percent of all buildings), another standard for buildings between 20,000 and 100,000 square feet, and a third standard for buildings over 100,000 square feet in size. (Source: Presentation by Mr. Terry Townsend, a Vice President of ASHRAE, to the Interagency Sustainability Working Group on March 26, 2003.)
[63]See the USGBC website at <**http://www.usgbc.org/LEED/existing/leed_existing.asp**>.
[64]See the USGBC website at <**http://www.usgbc.org/LEED/leed_interiors.asp**>.

to allow for building modifications as operational needs change. It has the advantage of being cheaper than LEED™, but the disadvantage of lacking third-party verification. The Army's long-term plan is to adopt LEED™ 3.0 when it is released, which is expected to better address the Army's needs.

Fourth, some have concerns regarding the scientific merit of the LEED™ rating system. For example, energy efficiency credits are based on simulating that a building's projected energy use meets or exceeds ASHRAE Standard 90.1 energy code, a standard that some energy experts consider inadequate and unworkable. In addition, while there are a number of required green building practices for attaining LEED™ certification (e.g., erosion and sediment control, commissioning, and storage and collection of recyclables), there are no prerequisites for ensuring water conservation and reuse.

Also of concern is that the only prerequisites for indoor environmental quality (IEQ) in LEED™ are having the ASHRAE outdoor ventilation rate and a smoking policy that prohibits exposures to second hand smoke. Since the ventilation rate is principally the code minimum, and most buildings now have a "no smoking" policy, virtually any new building would meet the IEQ criteria. Furthermore, a number of important potential specifications are not included and some of the standards referenced in LEED™ are not considered credible.

More generally, considering implementation costs and environmental benefits, some believe certain LEED™ credits are inappropriately weighted. For example, installing a vegetated roofing system is rewarded with a single credit, as is installing an outlet for electric vehicles or bike racks in the parking lot. In addition, while LEED™ has certain prerequisites in each individual area, these are often de minimis. As a result, it is possible under the LEED™ rating system to perform relatively poorly (or relatively average) in some areas and still become certified.

Despite these concerns, numerous agencies are finding LEED™ a useful tool in greening their buildings. In addition, the continuing LEED™ development process provides opportunities for Federal officials to provide input and participate in shaping future versions of LEED™ to address at least some of these issues.