



ALLIANCE TO
SAVE ENERGY
Creating an Energy-Efficient World

2010 Review of Federal Agency Compliance with Energy-Efficient Procurement Laws

By: Graziella Siciliano

With support from Oak Ridge National Laboratory and the U.S. Department of
Energy, Federal Energy Management Program
August 2011 (Revised August 2013)

I.	Executive Summary.....	2
II.	Background on Energy-Efficient Federal Procurement.....	6
III.	Analysis of Federal Agency Compliance with Energy-Efficient Procurement Requirements..	9
	➤ Review of Contract Solicitations	10
	➤ Interviews with Agency Personnel	17
	➤ Review of Agency Strategic Sustainability Performance Plans.....	20
IV.	Observations and Recommendations	25
	➤ FEMP should work cooperatively with federal agencies to help them develop EE strategic implementation plans to guide their activities.	26
	➤ FEMP needs to build stronger partnerships with federal supply sources, vendors and other agencies implementing sustainable acquisition requirements to maximize the impact of program resources.....	27
	➤ Increased FEMP resources should be dedicated to program marketing, improving guidance on contract compliance and an expanded emphasis on maximizing the savings potential of the EE procurement program.....	31
	➤ FEMP should direct increased resources to promoting personnel training, updating product technical specifications, improving acquisition planning and monitoring compliance.....	34
IV:	Conclusions.....	39

Acknowledgements

The author would like to thank Jeff Harris for his invaluable guidance on this project and Abi Kallushi and Linda Mesaros for their research efforts.

This report is based upon work supported by the Oak Ridge National Laboratory and Department of Energy, Federal Energy Management Program under Award Number #4000090719. However, all opinions expressed in this report are strictly those of the Alliance staff.

Disclaimer: This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

I. Executive Summary

According to the U.S. Department of Energy (DOE) Federal Energy Management Program (FEMP), the federal government purchases \$500 billion worth of goods and services a year.¹ An estimated \$10 billion a year is spent on energy-consuming products, making the U.S. government the leading consumer in the world in most product categories.² Expressed federal preference for cost-effective, energy-efficient (EE) products provides an incentive among producers competing for a share of the federal market to develop more efficient technologies. The improvement in the availability, performance and affordability of EE products is a benefit not only to federal buyers, but also to consumers at large.³

The Energy Policy Act of 2005 (EPAct 2005) mandates agencies to purchase EE products that meet either ENERGY STAR criteria or efficiency requirements designated by FEMP for product categories not covered by ENERGY STAR. In the most recent assessment of agency implementation and awareness (an update to a review in 2008), the Alliance to Save Energy (the Alliance) has found that federal agencies face persistent challenges to achieving full compliance with this requirement.

Results of 2010 Review

This report assesses levels of compliance and awareness through review of federal contract actions and interviews with agency personnel. Procurement through other methods, such as government purchase cards, government-wide acquisition contracts and blanket purchase agreements, has not been reviewed. In preparing this report, 102 contract solicitations for energy-consuming products issued by seven federal agencies were examined to identify references to the procurement regulations outlined in EPAct 2005. Compared with the earlier review, in 2010 the percentage of applicable solicitations with some form of reference to the EE procurement requirements had increased significantly, with 46% of the solicitations reviewed containing one or more “compliant” references. In 2008, only 7% of the contract solicitations reviewed contained any reference to the regulation.

In 2010, 46% of the solicitations reviewed contained one or more “compliant” references...

However, for the 2011 report, placement and type of language used to refer to the EE procurement requirements were more carefully examined. This closer look revealed inconsistencies and weaknesses in how agencies communicate energy efficiency requirements to

¹ Department of Energy/Federal Energy Management Program (FEMP), “FEMP Year in Review 2009, Department,” December 2009, p. 16, http://www1.eere.energy.gov/femp/pdfs/yirinrview_2009.pdf

² Department of Energy/Federal Energy Management Program, “Selling Energy-efficient Products to the Federal Government,” March 2008, p. 1, http://www1.eere.energy.gov/femp/pdfs/selling_eeproducts_to_gov.pdf

³ Harris, J.; Shugars, J.; Cate, A. ten; Westlin, H. “Technology Procurement as a Market Transformation Tool,” Proceedings of the 1998 ACEEE Summer Study on Energy-Efficient Buildings - Asilomar, CA. 1998, p.2, <http://www1.eere.energy.gov/femp/pdfs/techproc.pdf>

vendors. In general, agencies did not reference the requirement consistently, in the same part of the solicitation every time. In fact, no single section of these solicitations included compliance language more than 25% of the time. Consistent placement of language would more effectively communicate requirements to vendors, especially when each major solicitation can run hundreds of pages.

Furthermore, there is evidence that certain kinds of references to energy efficiency may not be sufficient indicators of an agency's awareness of the regulation – or reasonably assure compliance. For instance, in some product categories a very high percentage of available models in the market already comply with ENERGY STAR product specifications, so a solicitation that refers to a specific make or model (or a performance requirement) may meet ENERGY STAR requirements by chance rather than by intent, thus indicating neither awareness by the contracting officer of the EE procurement regulations nor a likelihood of future compliance.

A second limitation of some references to the EE procurement requirement is that they may be stated only in the general requirements sections of a solicitation document and not in the sections identifying technical specifications for individual products to be supplied. These specific requirements are what vendors need to respond to – so even though a general clause might refer to the EE procurement requirements in federal statute or in the Federal Acquisition Regulations (FAR), vendors will focus on meeting the detailed technical specification, even if it calls for a less efficient product that does not meet FEMP or ENERGY STAR criteria.

This evidence leads the Alliance to conclude that the 46% compliance figure for 2010, based on the review of solicitation documents, is very likely an overly optimistic assessment of actual levels of agency awareness and compliance.

...but evidence suggest that the 46% figure is likely an overly optimistic assessment of actual levels of agency awareness and compliance.

In the 2008 study, only 8% of procurement officials interviewed were aware of the EE procurement requirements enacted in EAct-2005. For this 2010 report, a much higher percentage, 50% of procurement personnel interviewed, exhibited high levels of familiarity with the regulations. However, this level of awareness was not uniform among the different categories of personnel involved in procurement: 100% of sustainability officials exhibited a high level of awareness while the figure was only 25% among product end-users such as facility managers or maintenance and operations staff.

For this report, the Alliance also reviewed efforts to promote EE procurement as written into federal agencies' Strategic Sustainability Performance Plans (SSPPs), released by the White House in September 2010. These SSPPs revealed key gaps and needs in achieving compliance with EE procurement mandates in the areas of training, enforcement, federal supply source compliance and procurement data tracking and reporting

Observations

Overall, the results of the 2010 review reveal an increase over 2008 in the general level of awareness with and implementation of EE procurement requirements by federal agencies. However, variations and weaknesses in how the compliance language is included, different levels of familiarity among key agency personnel, and needs revealed in agency SSPPs indicate that five years after the passage of EPOA 2005 the potential economic and environmental benefits of the EE procurement program are still not being fully realized.

This conclusion by the Alliance was informed by several key observations made during our research, as listed in the box below.

Key Observations of 2010 Review

1. Federal agencies lack a comprehensive approach to implementing EE procurement requirements within their organizations.
2. Vendor relationships are not fully leveraged to reinforce agency compliance.
3. Compliance by federal supply sources is still a work in progress.
4. Streamlining federal guidance for sustainable procurement is needed in order for agencies to efficiently and effectively meet requirements.
5. The EE Procurement program has relatively low visibility as a federal sustainability objective.
6. Inconsistent integration of contract language in solicitations sends mixed messages to vendors about federal EE procurement requirements.
7. There are additional opportunities to maximize federal energy savings through the EE procurement program by expanding covered product categories and encouraging agencies to buy “top-tier” efficient products.
8. Few agencies have comprehensive EE procurement training programs.
9. Inadequate acquisition planning tools and systems contribute to non-compliance.
10. Agency construction and product specifications do not effectively address EE procurement requirements.
11. There are limited mechanisms for tracking, monitoring and reporting on EE procurement.

Below, the Alliance outlines four recommendations to help FEMP address these challenges and areas of opportunity. The full report suggests activities for implementing these recommendations.

Recommendations

- **FEMP should work cooperatively with federal agencies to help them develop EE strategic implementation plans to guide their activities.**

The Alliance's first and foremost recommendation is that FEMP should offer assistance to each agency, beginning with the largest by purchase volume, to develop a strategic implementation framework that will better leverage agency resources and address opportunities to accelerate agency compliance with the EE procurement regulations. With myriad challenges to achieving compliance, Federal agencies would benefit greatly from a more comprehensive approach in implementing EE procurement requirements within their organizations.

- **FEMP needs to build stronger partnerships with federal supply sources, vendors, and other agencies implementing sustainable acquisition requirements to minimize the burden of compliance on agency personnel.**

Building and leveraging strategic relationships with key stakeholders that influence the procurement process in important ways should be a focal point in FEMP's strategy to accelerate agency compliance with EE procurement requirements. Due to the potential to address some of the observations drawn from the study, the Alliance highlights an initial core of stakeholders for FEMP's focused outreach, including federal supply sources, vendors and other agencies implementing sustainable procurement requirements.

- **Increased FEMP resources should be dedicated to program marketing, improving guidance on contract compliance and an expanded emphasis on maximizing the savings potential of the EE procurement program.**

Agency personnel exhibit insufficient levels of awareness with the EE procurement program and its requirements. Furthermore, observed weaknesses in the use of language in contract solicitations indicate that there is no universally accepted standard for how to effectively communicate requirements to vendors through contract actions. The Alliance believes that FEMP should invest in greater outreach efforts and improving guidance to boost levels of awareness and compliance, to maximize the energy and costs savings potential of the EE procurement program.

- **FEMP should direct increased resources to promoting personnel training, updating product technical specifications, improving acquisition planning and monitoring compliance.**

The final recommendation points to four areas that have not adequately integrated the EE procurement requirements, but that from the Alliance's perspective can have a high impact on compliance rates. From interviews and review of agency SSPPs there emerged a clear need for more comprehensive personnel training on EE procurement requirements. Interviews also revealed that the acquisition plans, automated systems and other tools designed to help agency

personnel build compliant solicitations may not sufficiently address the requirements. Also, the Alliance found that construction guide specifications used by federal agencies are not updated regularly enough to reflect the most current efficiency levels for equipment specified by the FEMP and ENERGY STAR programs. Another common issue articulated by the agency SSPPs was the lack of mechanisms to track, monitor and report on procurement data.

Conclusions

Although federal agencies have been required to purchase EE products since the passage of EAct 2005, this study has revealed that agencies face significant challenges to meeting this requirement. To meet these challenges, the Alliance outlines opportunities for FEMP, through its outreach and technical assistance, to help agencies move more rapidly towards full compliance.

II. Background on Energy-Efficient Federal Procurement

According to DOE, the federal government, as the largest consumer of energy in the nation, spent about \$17.1 billion on energy costs in FY2007.⁴ Yearly, it also spends about \$10 billion on energy-consuming products, making it the leading consumer of these products in the world in most product categories.⁵

The federal government can leverage this purchasing power to transform the domestic market for energy-consuming products.⁶ By choosing energy-efficient (EE) products, FEMP estimates that federal agencies can achieve annual energy savings of around \$200 million.⁷ Expressed federal preference for cost-effective EE products provides an incentive among producers competing for a share of the federal market to develop more efficient technologies. The improvement in the availability, performance and affordability of EE products is a benefit not only to federal buyers, but also to consumers at large.

One example of how the federal government has successfully influenced the market for energy-consuming products is the effect of Executive Order 12843 in 1993 requiring federal agencies to purchase only ENERGY STAR compliant computers and office equipment. Manufacturers moved

⁴ Department of Energy, "FY2007 Annual Report to Congress on Federal Government Energy Management," January 2010, p. E-2, <http://www1.eere.energy.gov/femp/pdfs/annrep07.pdf>

⁵ Department of Energy/Federal Energy Management Program, "Selling Energy-efficient Products to the Federal Government," p. 1

⁶ Harris, J.; Shugars, J.; Cate, A. ten; Westlin, H. "Technology Procurement as a Market Transformation Tool," Proceedings of the 1998 ACEEE Summer Study on Energy-Efficient Buildings - Asilomar, CA. 1998, p.2, <http://www1.eere.energy.gov/femp/pdfs/techproc.pdf>.

⁷ Department of Energy/Federal Energy Management Program, "Selling Energy-efficient Products to the Federal Government," p. 1. A more recent estimate is that federal agencies could save \$559 million/year in energy costs from "full compliance" with the EE procurement requirements (Taylor, M. and Fujita, K.S. 2012. "Program Potential: Estimates of Federal Energy Cost Savings from Energy-Efficient Procurement." LBNL report to DOE/FEMP. September).

quickly to join the ENERGY STAR program, resulting in rates of 90% market penetration of compliant models in most types of office equipment.⁸

Efforts to promote federal EE procurement received significant support with the passage of the Energy Policy Act of 2005 (EPAc 2005).⁹ Section 104 of EPAc 2005 requires federal agencies to purchase only ENERGY STAR-qualified and FEMP-designated products, which generally represent the top 25% in efficiency of all products in a covered category.¹⁰ Procurements for combat or combat-related missions are not bound by the legislation.

An agency can be exempt from this requirement only if a FEMP-designated or ENERGY STAR-qualified product is: a) not life-cycle cost-effective, or b) not available to meet the functional requirements of the agency. Justification for these exemptions must be provided in writing on a case-by-case basis and must be signed by the head of the agency. In effect, obtaining an exemption to the requirement places a considerable burden on agencies to justify non-compliance.¹¹

In 2007, passage of the Energy Independence and Security Act (EISA 2007), additions to the Federal Acquisition Regulations (FAR) and a DOE rulemaking reinforced the EE procurement requirements of EPAc 2005.¹² Also that year, FEMP, as the implementing agency for the EE procurement requirement, commissioned the Alliance to review the progress of agencies in implementing the requirements. The Alliance conducted a sampling of solicitations on the FedBizOpps.gov website, interviewed government contracting officers to gauge levels of compliance with and awareness of EE procurement requirements, and reviewed federal supply

Laws and Regulations Governing Federal Energy-Efficient Procurement

- Energy Policy Act of 1992
- Energy Policy Act of 2005
- Energy Independence and Security Act of 2007
- Executive Order 13423 (2007)
- Executive Order 13514 (2009)
- Final Rule on Federal Procurement of Energy Efficiency Products
- Federal Acquisition Regulations

⁸ Harris, J. et al, "Public Sector Leadership: Transforming the Market for Efficient Products and Services," 2005, p. 4 <http://www.pepsonline.org/publications/Public%20Sector%20Leadership.pdf>

⁹ Section 104 of EPAc 2005 was built on groundwork laid by EPAc 1992 and President Clinton's Executive Order 13123 from 1999, which encouraged energy-efficient procurement by Federal agencies but did not require it by law.

¹⁰ ENERGY STAR, a joint program of DOE and the Environmental Protection Agency (EPA) and FEMP currently identify performance criteria for more than 70 categories of energy-consuming products designated by FEMP and the ENERGY STAR program. For a current list of product categories, see the document "[Procuring Energy-Efficient Products](#)" on the FEMP website. In addition, life-cycle cost-effectiveness is built into the programs' evaluation criteria.

¹¹ Energy Policy Act of 2005, "Sec. 104: Procurement of Energy-efficient Products," p. 17, http://www1.eere.energy.gov/femp/pdfs/epact_2005.pdf

¹² The FAR codifies and publishes the policies and procedures that govern acquisitions by all Federal agencies.

sources to determine if they supplied only compliant EE products.¹³ The results of that review were that:

- Of the 164 solicitations examined that included requests for energy-using products covered by the legislation, only 7% appeared to be compliant.
- Only two of 25 agency procurement officials interviewed knew about the EE procurement requirement in detail; an additional seven were vaguely familiar with the requirement, while the remaining 16 had not heard of the regulation at all.
- The General Services Administration (GSA) and the Department of Defense's (DOD) Defense Logistics Agency (DLA) failed to identify any compliant models in 65% and 80%, respectively, of the covered product categories listed on their websites.¹⁴

The Alliance identified weaknesses in training, monitoring and enforcement of the EE procurement provision as major obstacles to agency compliance. Recommendations for improved monitoring and reporting were not addressed by FEMP in its final procurement rulemaking in 2009, implementing Section 104 of EAct 2005. Initially, the FEMP draft rule included a proposed requirement for agencies to report on all exemptions granted to the EE procurement rule. However, this proposal was not included in the FEMP final rule, based on the burden it would place on agencies and the claim that existing reporting mechanisms were adequate to monitor agency progress in implementing the EE procurement requirements.¹⁵

Developments in 2009-2010 elevated the profile of EE procurement among federal energy and environmental priorities. Executive Order 13514 of October 2009 "*Federal Leadership in Environmental, Energy, and Economic Performance*" (E.O. 13514) reiterates the importance of EE procurement as a strategy for federal leadership in promoting environmental quality.¹⁶ E.O. 13514 aggregates several laws and regulations governing environmental sustainability in the federal sector, including those regarding sustainable acquisition.¹⁷ In addition to setting forth the goal

¹³ Federal agencies are required to post all contracting opportunities with a value greater than \$25,000 on the Federal Business Opportunities website, www.FedBizOpps.gov. Section 104 (c) of EAct 2005 "Procurement of Energy-efficient Products: Listing of Energy-Efficient Products in Federal Catalogues," requires that GSA and DLA supply only compliant products, and that those products be clearly listed and displayed.

¹⁴ Capanna, S.; Devranoglu, S.; Loper, J. "A Review of Federal Agency Compliance with Energy-efficient Procurement Laws," May 2008 p. 2-3, http://ase.org/sites/default/files/file_AgencyComplianceW_EE.pdf

¹⁵ Notice of Proposed Rulemaking, *Federal Register*, 72 FR 33696, 10 CFR Part 436, June 19, 2007, "Federal Procurement of Energy-efficient Products," http://www1.eere.energy.gov/femp/pdfs/72_fr_33696.pdf; Final Rule, *Federal Register*, 74 FR 18030, 10 CFR Part 436, March 13, 2009, Federal Procurement of Energy-efficient Products, http://www1.eere.energy.gov/femp/pdfs/74_fr_10830.pdf

¹⁶ Executive Order 13514 "*Federal Leadership in Environmental, Energy, and Economic Performance*," October 2009, p. 1, http://www.whitehouse.gov/assets/documents/2009fedleader_eo_rel.pdf

¹⁷ Environmental attributes of products addressed by E.O 13514 sustainable acquisition goals state that products must be: 1) Energy-efficient (EPA, FEMP), 2) water-efficient (EPA), 3) contain bio-based content (USDA), 4) meet environmentally preferable criteria (EPA), 4) non-ozone depleting (EPA), 5) contain recycled content (EPA), and/or 6) non-toxic or less-toxic alternatives (EPA).

that 95% of all procurement contract actions meet sustainability requirements, the Order provides impetus for more vigorous monitoring and reporting on agency progress towards sustainable acquisition goals.¹⁸ As required by the Order, each federal agency has published a SSPP which details its approach to fulfilling the requirements of the Executive Order and offers important insights on how agencies are approaching compliance issues for EE procurement.¹⁹

In April 2010, FEMP's performance in fulfilling its obligations to help agencies meet procurement requirements came under scrutiny with an internal audit conducted by the DOE Inspector General. The audit focused on FEMP efforts to develop and update product specifications for energy efficiency. As a result of the audit, FEMP has committed to a number of activities including directing adequate resources to the EE procurement program to meet its objectives, improving the communication of product procurement information to federal customers, and incorporating the results and recommendations of ongoing studies to design future policies and activities.²⁰

In the context of this renewed attention to federal EE procurement, FEMP commissioned the Alliance to conduct a second review of federal agency compliance with EE procurement regulations. This study was to focus on: a) review of contract actions, b) agency personnel interviews and c) review of SSPPs. The following sections present the results of this review, followed by Alliance observations and recommendations to FEMP on activities it can undertake in conjunction with federal agencies to promote full compliance with the EE procurement requirements.

III. Analysis of Federal Agency Compliance with Energy-Efficient Procurement Requirements

The objective of this review was to monitor federal agencies' compliance with and awareness of EE procurement regulations. The Alliance reviewed the references to EE procurement in contract solicitation documents, and interviewed agency personnel. The Alliance also reviewed SSPPs to see how agencies are approaching the challenges of sustainable procurement as it relates to energy efficiency.

¹⁸Secs. 4 and 5 of E.O. 13514 require that the Office of Management Budget (OMB) Scorecard reflect agency performance in implementing requirements of this order, and that the White House Council on Environmental Quality work with OMB to streamline reporting metrics to monitor agency progress on implementing this order. The Order also includes a requirement that Federal agencies increase the transparency of their progress in meeting the requirements by disclosing to the public on Federal websites the actions taken and results associated with the implementation of this order.

¹⁹ Agency SSPP's were released by the White House in September 2010. Plans can be found at <http://www.whitehouse.gov/administration/eop/ceq/sustainability/plans>.

²⁰ DOE Office of the Inspector General, "The Department of Energy's Program to Assist Federal Buyers in the Purchasing of Energy-efficient Products," April 2010, OAS-RA-1-08, p. 2, <http://energy.gov/sites/prod/files/igprod/documents/OAS-RA-10-08.pdf>.

➤ Review of Contract Solicitations

Solicitation Review Methodology

The methodology for this review, developed for the 2008 review, was based on sampling a select number of procurement actions posted on the FedBizOpps.gov website that involve acquisition of energy-consuming products in ENERGY STAR and FEMP-designated product categories. The review of solicitations on FedBizOpps.gov helps us understand how well the EE procurement regulations are being followed at the solicitation stage of the procurement process. Data to track the actual products delivered as a result of the solicitation are not readily available, although this would be an important area for future work since the intent of the law is not just to solicit EE products, but to purchase them. However, language included in solicitation documents is an excellent indicator of how effectively agencies are communicating federal requirements for EE products to vendors.

The 2008 report raised important questions about effective communication by agencies: What language do agencies use most frequently in their solicitations to request EE products? Which part of the solicitation most commonly contains energy efficiency language? Can anything be inferred about the effectiveness of agency communication of EE procurement requirements from the different ways that compliance language is used in solicitations?²¹ To attempt to answer these questions, the Alliance also gathered data on types of energy efficiency language and its placement within a solicitation, while continuing to look for references to the EAct2005 and FAR requirements in any form.

There have been other refinements to the scope and depth of the analysis, compared to the previous 2008 study. This time the Alliance focused on procurements by seven large agencies: General Services Administration (GSA), Department of Defense (DOD), Department of Energy (DOE), Department of the Interior (DOI), Department of Veterans Affairs (VA), Department of Health and Human Services (HHS), and the Environmental Protection Agency (EPA) to allow for a deeper analysis of compliance.

The 2008 review also indicated a need to expand the analysis to “indirect acquisition” of energy-consuming products via construction and service contracts. Thus for this review, in addition to product-specific solicitations, those for construction and renovation projects and for maintenance and repair services were also targeted.

From May through September 2010, the Alliance searched FedBizOpps.gov and identified 102 solicitations from the target agencies that requested energy-consuming products within ENERGY STAR- and FEMP-designated categories: 56 product solicitations and 46 service solicitations. The Alliance first analyzed compliance levels in these solicitations based on the criteria used in the 2008 study, and then looked in more detail at how the agencies were communicating energy

²¹ Capanna *et al.*, “A Review of Federal Agency Compliance with Energy-efficient Procurement Laws,” p. 19-20

efficiency requirements to vendors and what this may reveal about awareness of the requirements among agency personnel.

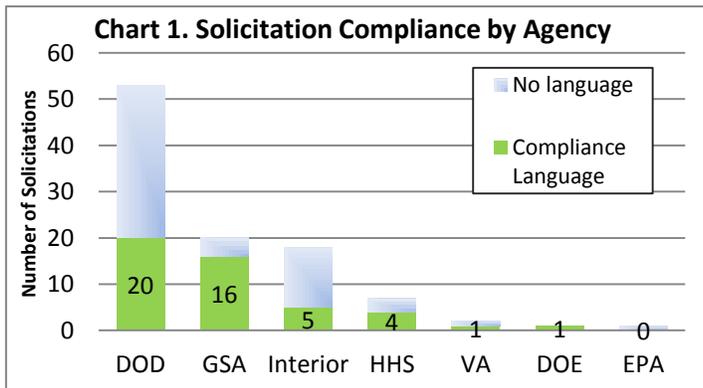
Results of the Solicitation Review

Agency solicitations show signs of significant improvement.

In the 2008 review, solicitations were deemed to be compliant with the spirit of the EE procurement regulations if they contained any reference:

- specifying that products must be ENERGY STAR-qualified and/or FEMP designated;
- specifying that all products provided must comply with Section 104 of EAct 2005;
- outlining energy-efficiency performance specifications that met ENERGY STAR or FEMP guidelines;
- requesting an ENERGY STAR-qualified product; or,
- referring to relevant FAR clauses - 23.203-23.206 or 52.223-15.²²

Despite such a broad definition of compliance, only 7% of solicitations reviewed in 2008 contained any of the above language.²³



Using these same criteria, compliance of solicitations in 2010 has shown significant improvement, with 47 solicitations (46%) containing one or more compliant references.

Chart 1 details compliance levels, by agency, from the current review.

DOD accounted for over half (53) of the solicitations reviewed, followed by GSA (20), Interior (19) and HHS (7), respectively. There were relatively low numbers of solicitations for VA (2), DOE (1) and EPA (1).²⁴ The corresponding percentage of compliant solicitations by

²² FAR clauses on EE procurement: FAR 23.203 – 206 includes detailed information about the regulation as defined in EAct 2005, including requirements, exclusions and exemptions. Part 52 of the FAR is the “Solicitation Provisions and Contract Clauses.” Generally, most contract clauses in solicitations come from here. FAR 52.223–15 “Energy Efficiency in Energy-Consuming Products (DEC 2007)” is the main EE procurement FAR contract clause. FAR 52.212-5 (b) (29) “Contract Terms and Conditions Required to Implement Statutes or Executive Orders—Commercial Items (OCT 2010)” is an often used clause that aggregates all other FAR clauses pertaining to the purchase of commercial items, including 52.223-15.

²³ Capanna *et al.*, “A Review of Federal Agency Compliance with Energy-efficient Procurement Laws,” p. 3

agency as shown in the chart was DOD (38%), GSA (80%), Interior (28%), HHS (57%), VA (50%), DOE (100%) and EPA (0%).²⁵

Differences in the placement of compliance language may undermine 2010 results.

On the surface, increased frequency in the use of compliance language was an encouraging sign. However, after taking a closer look at the type of compliance language used and its placement in solicitations, a number of questions arose concerning how well agencies are communicating their EE procurement requirements to vendors.

Where the energy efficiency language is placed is one determinant of how effectively agencies are communicating. Agencies can state their requirements for FEMP-designated or ENERGY STAR products in one or more of the main sections of a solicitation:

- the product specification;
- the scope of work; and,
- the contract clauses.

Of the solicitations we reviewed, 17.6% included language in multiple sections (15 solicitations had language in two sections; only three had language in all three sections) while 28.4% complied by referring to the regulation in only one part of the solicitation.

No single section of the solicitations reviewed contained compliant language on EE purchasing more than 25% of the time. This indicates a possible problem with inconsistency if vendors are not certain which section of a solicitation they should be reading to understand the EE requirements.²⁶

Chart 2 shows levels of solicitation compliance by section for all solicitations.

²⁴ After deciding to focus this study on the top seven federal agencies in terms of overall purchasing, the Alliance found few relevant solicitations within the study period for DOE, EPA, or VA. This indicates that, in the future, reviewing procurement actions in addition to those posted on FedBizOpps.gov may be necessary to get a better picture of compliance for these agencies.

²⁵ The Alliance also looked at the results within departments of each agency where there were enough solicitations. For DOD: Air Force (9 of 19 solicitations had compliant language); Army (1 of 4); Defense Logistics Agency (5 of 20); Navy (5 of 9). For GSA: Public Buildings Service (13 of 17); Federal Acquisition Service (3 of 3). For Interior: National Park Service (2 of 7); Fish and Wildlife Service (0 of 2); Bureau of Indian Affairs (1 of 5); other departments (2 of 4).

²⁶ Eleven solicitations included compliant language in the product specification section of the solicitation, but only for some of the energy-consuming products specified for purchase. These solicitations included no other language referring to the regulation. The vast majority of these were for construction/renovation and maintenance/service contracts with specification for multiple energy-consuming products. The regulation requires that 100% of purchases be energy-efficient, so it was determined that these solicitations were non-compliant overall.

(Note that the sum of these three groups is more than 46% of all solicitations, due to some solicitations that had procurement language in more than one section.)

Having language in each of these main parts of a solicitation, rather than in just one or two, would more clearly communicate to vendors that meeting the EE procurement requirement is a priority for the contract action. This level of repetition may be necessary in the context of a typical procurement document, which can range from around 15 pages of technical and administrative requirements for a product solicitation to 500 or more pages for a service solicitation. However, only three solicitations included language in each of the main sections (2 from DOD, and 1 from Interior).

While the instances of compliance have increased, the way in which is it applied is not uniform across agencies.

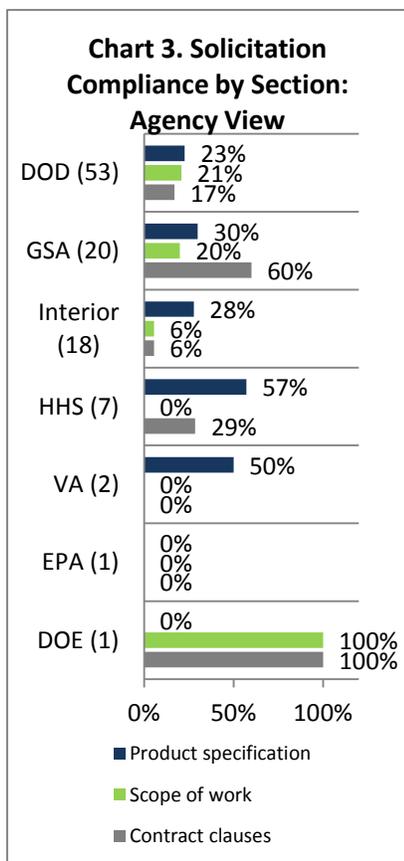
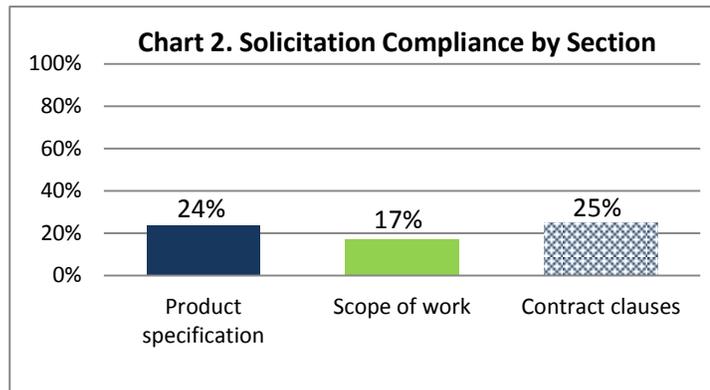


Chart 3 shows levels of compliance by solicitation section for each agency.

Further, no consistent pattern for application of the language was observed within agencies, or within specific procurement offices. For example, two solicitations from the same agency procurement office included language in two different sections of the solicitation – one in the product specification and one in the contract clauses section. This could point to varying levels of knowledge among agency personnel or uneven integration of EE procurement requirements into procurement processes among agency offices.

If agencies are not including language in all sections, how do they decide which section of the solicitation is best? Which sections are the most important in communicating federal requirements for EE products? These are difficult questions to answer without additional information from vendors. Nevertheless, we offer some likely hypotheses.

The section containing product technical specifications (or construction project specifications), with detailed information

about the products to be supplied, represents the most substantive statement of what is requested from vendors. For solicitations that focus on product procurement, it makes sense that a vendor interested in winning government business would pay close attention to meeting the technical requirements for those products and then compete to offer agencies the best price. While EE products generally have lower life-cycle costs, they may involve a higher initial cost. Unless the EE product requirement is clearly specified, a vendor who supplies such products would be at a competitive disadvantage in terms of offering the lowest first-cost, since agencies typically base their economic decisions, in practice, on first cost rather than life-cycle costs – despite repeated policy directives to emphasize life-cycle costs.²⁷

Further, inclusion of ENERGY STAR or FEMP performance specifications in this section is an excellent indicator of awareness as it requires a high level of familiarity with EE procurement requirements, along with knowledge of where to access specifications and how to apply them in solicitations. If the contracting officer is confirming delivery of a FEMP- designated product, it also assumes an ability on the part of the contracting officer to compare the product's specification to FEMP performance guidelines.

The scope of work is a narrative summary that describes the main goals and objectives of the solicitation. For instance, for many building construction solicitations it was made clear in this section that the project must be designed to consume at least 30% less energy than current building codes, as required of federal agencies for new construction and major renovation projects. In other words, energy efficiency was clearly one overall objective of the project. Despite this language in the scope of work, the product specification sections in many of these solicitations did not refer to the energy efficiency procurement requirements, and in many cases had technical specifications that did not meet FEMP or ENERGY STAR requirements. Inconsistent language can put even the most conscientious vendor in a difficult position, but it is likely that most vendors will choose to supply exactly the model or performance level specified, rather than an upgraded, efficient model that may cost more to purchase (despite lower life-cycle costs).

The contract clauses component is often positioned at the end of a solicitation and includes numerous references to the Federal Acquisition Regulations (FAR) which codify uniform policies for acquisition of supplies and services by federal agencies. This section often contains many pages of FAR references to other procurement requirements.²⁸ The FAR clause relevant to EE procurement, FAR 52.223-15, may be included in the contract clauses section as one of these many references.

²⁷ Energy Policy Act of 1992, Section 161 and FAR Subpart 7.1.

²⁸ FAR 52.212-5 (b) (29) "Contract Terms and Conditions Required to Implement Statutes or Executive Orders—Commercial Items (OCT 2010)," is an often used clause that aggregates all other FAR clauses pertaining to the purchase of commercial items. The 52.223-15 is number 29 of 54 references in just one section of this clause. There may be many others, depending on the parameters of the procurement.

Evidence that FAR clauses were applied as “boilerplate” in the contract clauses section of many solicitations reviewed indicates that compliance language in this section is not a good indicator of agency awareness of EE procurement requirements.

There was significant evidence that the FAR clauses were often included indiscriminately, as “boilerplate.” In our search on FedBizOpps.gov for energy-consuming product solicitations, there were numerous examples where no energy-consuming product was being sought yet FAR 52.223-15 was still included in the contract clause section of the solicitation. One notable example was a solicitation for 915 tons of crushed limestone that included the FAR clause for EE products.

The Alliance concludes that simply including the FAR clause on EE products as one of many such standard provisions in a solicitation may not be a good indicator of agency awareness of federal policy or specific requirements in law and in the FAR. Simply appending the EE language within a long list of other contract clauses may have little or no impact in communicating to vendors and achieving substantive compliance. Language that highlights energy efficiency criteria in the product specification is likely to be far more effective.

Including compliance language in the product specification sections of the solicitation sends an unambiguous message to vendors about the energy-efficiency requirements for the products requested.

We found examples of non-compliant product specifications coupled with compliant language in other parts of the solicitation. For example, one solicitation called for a specific make and model of a commercial freezer that was not an ENERGY STAR-qualified model, even though the FAR clause 52.223-15 was included in the contract clause section. Again, this puts vendors in the difficult position of deciding whether to meet the specific technical requirements, or meet the more general directives and perhaps offer a lower first-cost product.

After reviewing how compliance language is applied in the major sections of these solicitations, it is apparent that referring to the EE procurement requirements within the product specification itself is most likely the best way to communicate with vendors about these requirements. A study of vendor attitudes towards compliance language and placement could provide more insight into effective communications. While a useful task for future work, this was beyond the scope of the present study.

Language used for compliance also matters.

In addition to where language is placed in a solicitation, the type of language used is also an important consideration in effective communication with vendors. While compliance language

types found in the scope of work and contract clauses sections were consistent overall, there was more variety in the language used in product specification sections. The Alliance looked more closely at this language to see if they were all equally effective in determining agency levels of awareness of EE procurement requirements.²⁹

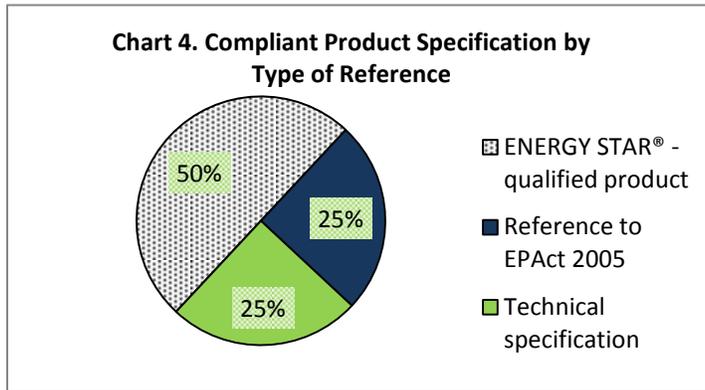


Chart 4 indicates the frequency with which certain compliance language was used in the product specification sections of solicitations reviewed.

Twelve solicitations were considered to have compliant product specification sections because they listed product models that were ENERGY STAR-qualified.³⁰ To be clear, these solicitations

did not refer to the ENERGY STAR label or program *per se*, but only to the product make and model specified for purchase. Alliance staff confirmed compliance by consulting the product lists available on the ENERGY STAR website. Eight of these 12 solicitations included no other language regarding energy efficiency.

The qualifying products were mostly (10 of 12) for computer/office equipment and lighting.³¹ ENERGY STAR computers and lighting have high rates of market penetration, making it likely that the selection of a compliant product model in these categories may have been due to chance rather than to a deliberate effort to comply with regulations. It also could be due to a higher level of consumer awareness of the ENERGY STAR label, and a desire by the end-user to purchase these products, rather than awareness of the energy efficiency requirements or intent to comply with them.

For certain categories of products where ENERGY STAR qualified products dominate the market, specifying a compliant product make and model is likely due to chance, and thus not a good indicator of agency awareness or likelihood of future compliance.

²⁹ Language used in the other parts of the solicitation, the scope of work and contract clauses sections, was consistent overall. In the scopes of work, 17 solicitations referred to language in EPA Act 2005. Ten other solicitations had general EE language, referencing LEED standards or sustainable design principles for Federal Buildings with efficiency requirements, but these were inadequate to indicate the Federal requirement for delivery of EE products. In the contract clauses section, all 24 compliant references referred to either FAR 52.223-15 or FAR 52.212-5 (b) (29).

³⁰ All of these were found in product solicitations. There were ENERGY STAR-qualified products specified in service solicitations, but as discussed in footnote 18, solicitations for services often included multiple energy-consuming products, some correctly specified and others not.

³¹ We found non-compliance for 19 out of 31 product solicitations for popular ENERGY STAR product categories (refrigerators, freezers, room air conditioners, printers, copiers, computers, compact florescent bulbs, LED lighting, light fixtures).

This inference is supported by the fact that levels of compliance for lesser-known ENERGY STAR product categories were much lower.³² For FEMP-designated product categories such as air-cooled chillers, boilers and motors, only one of 17 solicitations included compliant language (the FEMP technical specification) in the product specification. The Alliance was unable to draw similar

The initial estimate of 46% compliance among the contract solicitations is an overly optimistic assessment of actual levels of awareness and intentional compliance with the EE procurement regulations.

conclusions for products included within the services solicitations because they often included both ENERGY STAR and FEMP-designated product categories of products, some correctly specified and some not.

Thus, it is likely that requests for qualifying ENERGY STAR products found in the solicitations we reviewed are at least in some cases more a reflection of the label's market

presence rather than procurement officials' awareness of the regulation. While this market presence may bring about increased compliance for certain types of products by chance, it still does not achieve 100% compliance even within those categories, and certainly does not improve compliance among FEMP-designated products. The fact that a specific product being sought may happen to qualify for the ENERGY label is not by itself clear evidence of awareness of the EE procurement regulations or the likelihood of future compliance by that contracting officer or agency.

Given the inconsistencies in the application of compliance language in the main sections of the solicitation and evidence that certain language types are not solid indicators of compliance, it is likely that the initial estimate of 46% compliance among the contract solicitations is an overly optimistic assessment of actual levels of awareness and intentional compliance with the EE procurement regulations.

➤ Interviews with Agency Personnel

Agency Personnel Interview Methodology

The Alliance conducted interviews with federal agency personnel to gauge whether or not they were familiar with the EE procurement requirements and, if they were, to what degree.

³² We found no compliant language among the 8 product solicitations for lesser-known ENERGY STAR product categories, such as commercial steam cookers, enterprise servers, roofing products, and commercial food services equipment.

Entries in FedBizOpps.gov provide contact information for the contracting officer originating each solicitation. The Alliance contacted several of these procurement officials for interviews. In addition, other agency personnel were sought out who, while not responsible for putting together solicitations, influence the procurement process in important ways. Procurement department managers were interviewed as well personnel charged with implementing agency sustainability objectives. The Alliance also spoke to several end-users (all facility managers) who initially request energy-consuming products and often provide contracting officers with the technical requirements for these products.

In total, the Alliance interviewed 22 federal agency personnel:

- 8 contracting officers,
- 4 procurement managers,
- 4 end-users, and
- 6 sustainability personnel.

Although there seemed to be a greater level of awareness of EE procurement requirements among agency personnel compared with 2008 levels, this familiarity was not uniform among different key categories of agency personnel that influence procurement in important ways.

It was determined that federal personnel had a “high level of awareness” with the regulation if, in addition to awareness of the requirement to buy EE products, they displayed knowledge of ways to implement the requirement and where to find the needed information. Indicators of this level of awareness included, but were not limited to, familiarity with ENERGY STAR and/or FEMP-designated product categories, ready access to EE procurement guidance, or knowledge of where model contract language could be accessed and added to solicitations.

We considered personnel to have a ‘low level of awareness’ if they indicated that they knew about EE procurement requirements but were not sure about how to implement the requirement. Agency personnel were also asked about their familiarity with ENERGY-STAR qualified and FEMP-designated products.

The Alliance recognizes that the following observations are drawn from an extremely small group of interviews, chosen not on a statistical basis but partly for convenience and to help extract as much insight as possible from a limited number of interviews. A broader-based survey of procurement officials’ awareness and familiarity of EE requirements, based on a careful sample design, would be useful to undertake as an interagency exercise, both in the near future as a baseline and then repeated on a periodic basis.

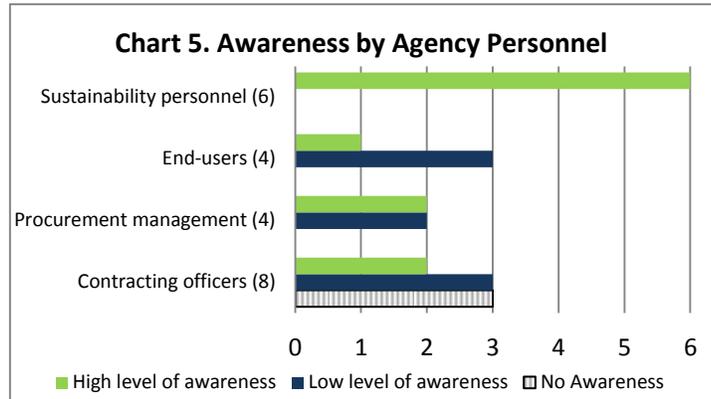
Results of Interviews

The 2008 review revealed a high level of awareness of the EE procurement regulations among only 7% of those interviewed.

For this review, 11 out of 22 agency personnel interviewed, or 50%, had a high level of awareness of the regulations. The Alliance also assessed whether or not this level of awareness was uniform among the different categories of personnel interviewed.

Chart 5 shows the breakdown of high levels of awareness among the different interview groups.

More than half of those with a high level of awareness were sustainability officials – and all of these individuals were in the “high” category. As these individuals were charged with implementing E.O. 13514 at their agencies, it should not be surprising that they all had a high level of awareness of EE procurement requirements. In contrast, only two of four procurement managers had a high level of awareness.



Of the eight contracting officers interviewed three (37.5%) were completely unaware of the procurement requirements. In the 2008 review, this figure was 64%. Another group of three contracting officers had a low level of awareness. Last, three of the four end-users were deemed to have a low level of awareness of EE procurement itself, but were familiar with the federal requirements for facility energy intensity reduction requirements – which of course are assisted by specifying EE products as existing equipment needs replacement.³³

During the interviews, it became evident that the visibility of FEMP-designated products is a serious obstacle to compliance. Only two agency personnel (both sustainability officials) had ever heard of FEMP-designated products, in stark contrast to the ENERGY STAR labeling program, which was recognized by all personnel interviewed.

Additional Insights from Conversations with Agency Personnel

Several agency personnel indicated during interviews that the process of building a contract solicitation is aided significantly by agency-specific procurement planning tools and the use of automated acquisition systems.

These systems were designed to relieve some of the burden of constructing complete and consistent solicitations that incorporate the myriad procurement requirements. However, there was anecdotal evidence that these systems do not adequately address EE procurement requirements.

³³ EISA 2007 set energy reduction goals for Federal facilities, mandating yearly energy intensity reductions relative to a 2003 baseline. These requirements were strengthened by Executive Order 13514 in 2009.

One person indicated that she used the contract clauses from old solicitations for “similar procurements” to include because that agency’s automated system was so out of date that it did not include the sustainable acquisition requirements from the past five years. After speaking with one contracting officer in more depth about these issues, it seemed that the automated system he used to build solicitation documents included no questions or prompts on energy-using equipment or EE procurement requirements. An assessment of the use of automated acquisition systems among federal procurement personnel and the level of integration of EE procurement requirements in these systems was outside of the scope of this study. Further exploration of this issue could shed light on how these systems affect compliance levels and why numerous solicitations we reviewed included reference to the EE procurement FAR clause even though they did not call for purchase of any energy-consuming products.

The Alliance also talked to personnel about the acquisition planning process. Several contracting officers indicated that product technical specifications are produced mostly by those requesting the product or by technical specifying authorities. Several facility managers confirmed their role in specifying products, yet did not feel that compliance with procurement regulations was their responsibility. One person we interviewed acknowledged the important connection between product technical specification and compliance, and the need for shared responsibility by end-users and procurement officials in assuring compliance.

There are regulations that mandate the integration of environmental objectives into acquisition planning tools.³⁴ The Alliance was not able to do a complete assessment of how well federal agencies incorporate the EE requirements into acquisition plans, as few of these plans were publicly available on agency websites. However, the plan templates of several agencies that were examined revealed that the extent of consideration of EE procurement issues in these plans was limited to a yes/no question on whether or not the products procured “addressed all environmental requirements.”

The Alliance believes that an important area for future work should focus more attention on agency procurement plans in order to identify planned acquisitions earlier in the process and work with personnel to incorporate the EE criteria.

➤ **Review of Agency Strategic Sustainability Performance Plans**

The 2010 compliance review was conducted in the context of renewed emphasis on EE procurement due to goals outlined in E.O. 13514 of October 2009 “*Federal Leadership in Environmental, Energy, and Economic Performance*.” The SSPPs, released in September of 2010, summarize agency approaches to fulfilling those goals. The sustainable acquisition objectives outlined in these plans extend to procurements across all environmental attributes, and have

³⁴ Acquisition plans are tools to help coordinate and integrate those responsible for an acquisition valued at over \$100,000, but are also commonly used for some acquisitions below this threshold, depending on the complexity of the acquisition. According to the FAR Subpart 7.105 b (17), acquisition plans must discuss environmental and energy conservation objectives, including all environmentally related requirements to be included in the solicitation.

important implications for the federal EE procurement program. While the sustainable acquisition sections of the SSPPs reviewed generally averaged only two to three pages, they provided excellent insight on the objectives agencies will focus on to meet sustainable acquisition requirements and what obstacles they face.

The Alliance believes that FEMP has both an opportunity and a responsibility to help agencies fully develop their sustainable acquisition strategies to ensure that EE procurement regulations set forth in EAct 2005 are adequately addressed.³⁵ To aid FEMP in this task, the Alliance broadened its original scope of work to include a review of the sustainable acquisition sections of SSPPs for the seven agencies targeted for the compliance review.

The rest of this section highlights key observations of those compliance issues addressed and not addressed by the SSPPs in the areas of EE procurement training, enforcement, federal supply source compliance and procurement data tracking and reporting.

Addressing Agency Guidance and Acquisition Systems

In the seven SSPPs we reviewed, all agencies admitted weaknesses in current sustainable acquisition guidance and clearly stated their intention to integrate, regularly update and strengthen guidance to incorporate all environmental objectives required by the Executive Order, including energy efficiency.

Relative to other agencies, DOD's SSPP provides more detail on a variety of specific activities it plans to undertake to address these weaknesses. For instance, DOD acknowledges that many times personnel other than those conducting procurement actions are responsible for technical specifications that find their way into solicitations, and proposes to institute a schedule for reviewing and updating technical specifications for products to ensure compliance with all sustainable acquisition goals. DOD plans to start this process by first ensuring that all EE procurement requirements are incorporated into specifications. The agency also plans to disseminate procedures for how sustainable procurement exceptions are handled and to enforce their use.³⁶

³⁵ In earlier comments, the Alliance had expressed concerns that the sustainable acquisition goals in E.O. 13514 might be interpreted as meaning that 95% of contract actions meet at least one of the environmental attributes, instead of all attributes, including energy efficiency as currently required by law. In their SSPP's, each agency interpreted the requirement to mean that 95% of acquisitions must meet each one of the six sustainable targets identified, where applicable. The Alliance had also questioned whether the 95% compliance goal of the E.O. might contradict and in effect weaken the existing EE procurement legislation that mandates 100% compliance. While that is still a concern, the Alliance believes that if processes are put in place to achieve 95% compliance, then this will still represent a major step forward compared with current practice in EE procurement, and will bring the 100% target well within reach. These issues highlight the important role that FEMP has to play in assuring that the sustainable acquisition goals are interpreted and implemented among agencies in ways consistent with the EE procurement regulations.

³⁶ Department of Defense, Strategic Sustainability Performance Plan, 2010, P. II-35

http://www.acq.osd.mil/ie/download/green_energy/dod_sustainability/DoD%20SSPP-PUBLIC-26Aug10.pdf

DOD is also proposing changes to existing contract planning tools and acquisition systems that will prompt users to use green purchasing requirements and incorporate sustainable elements into decision-making criteria at key points in the acquisition process. The DOD plan emphasizes updates to the tools, forms and checklists used by contracting officers to ensure that solicitations comply with procurement requirements.³⁷

While all SSPPs reviewed prioritized the need for improving guidance on meeting sustainable procurement requirements, only two of the seven agencies (DoD and EPA) planned to better integrate these requirements in acquisition planning tools and systems used by personnel to facilitate the procurement process.

While EPA has also proposed updates to its automated acquisition system, the changes target the system's ability to track procurement data, rather than to help personnel produce solicitations that are compliant and consistent with the law in terms of sustainable acquisition.³⁸ Surprisingly, no other agency SSPP reviewed mentioned any plans to update tools used by procurement personnel to facilitate sustainable or EE acquisition.

Approaches to Training Personnel on Sustainability Requirements

Another need emphasized by all the SSPPs reviewed was the need for training on sustainable acquisition. In its SSPP, DOD proposes an aggressive program of required, annual training for a wide range of agency personnel. First, it will integrate green procurement requirements into all applicable training and auditing programs. It will also provide updated training on an annual basis to a range of personnel that include procurement personnel, commercial purchase card holders, environmental managers, technical and requirements planners, and personnel who requisition products or service through any source of supply (e.g., facility managers, construction managers, fleet managers and IT managers).³⁹

GSA goes a step further and has committed to require green purchasing training for all employees, though it does not comment on the frequency of training. The agency is also working with OMB's Office of Federal Procurement Policy to incorporate sustainable acquisition training in basic and advanced training for the federal acquisition workforce.⁴⁰

³⁷ DOD, *op. cit.*, P. II-34.

³⁸ Environmental Protection Agency, Strategic Sustainability Performance Plan 2010, p. 51
<http://www.epa.gov/epahome/pdf/epasspp20102020.pdf>

³⁹ DOD, *op. cit.*, P. II-36.

⁴⁰ General Service Administration, Strategic Sustainability Performance Plan 2010, p. 2-40
http://www.gsa.gov/graphics/admin/GSA_Strategic_Sustainability_Performance_Plan.pdf

The SSPPs of the remaining agencies acknowledge the need for dedicated training on sustainable acquisition, and state their intentions to provide this kind of training – albeit only to procurement personnel. Further, there was no indication that proposed training would be required and/or repeated regularly both as a refresher and to reach newly hired personnel.

Agencies have inconsistent approaches to training personnel on sustainable procurement requirements.

Sustainability Efforts of the Government’s Largest Federal Supply Sources: GSA and DOD’s Defense Logistics Agency (DLA)

Section 104 part (c) of EAct 2005 identifies the important role that GSA and DLA can play, as federal supply sources for products, in helping other agencies meet the EE procurement requirements. These agencies cater exclusively to federal agencies through their online purchasing websites, GSA Advantage! and DLA’s DOD EMALL. Under the legislation, these agencies are required to “clearly identify and prominently display” ENERGY STAR and FEMP-designated products in their product listings and to supply *only* these qualifying products for all covered product categories.⁴¹

In the Alliance’s 2008 review, we found that GSA and DLA had failed to sell any compliant models in 65% and 80%, respectively, of the covered product categories.⁴² While DLA mentions its obligations under the law in its SSPP appendices, it does not outline any activities to indicate whether or how it is moving towards compliance with the EAct-2005 and EISA provisions.

Federal supply sources either minimally addressed their compliance challenges in their SSPPs, or did not address them at all.

In its SSPP, GSA mentioned that it will update green product labels on GSA Advantage! to clearly identify compliant products. Specific to EE procurement, GSA indicates that it has added alerts to its purchasing website to notify customers who select non-ENERGY STAR products that compliant alternatives are available.⁴³ Such a buyer alert, however, would only partially address the GSA requirements under the law.

⁴¹ Energy Policy Act of 2005, “Sec. 104 (c): Procurement of Energy-efficient Products: Listing of Energy-Efficient Products in Federal Catalogues,” p. 18, http://www1.eere.energy.gov/femp/pdfs/epact_2005.pdf. The law also allows an exception to these requirements in cases where the agency ordering a product specifies in writing that no Energy Star product or FEMP-designated product is available to meet the functional requirements, or that no such product is cost-effective for the intended application. Combat-related products are also exempted.

⁴² Capanna *et al.*, “A Review of Federal Agency Compliance with Energy-efficient Procurement Laws,” p. 3

⁴³ GSA, *op.cit.*, p. 2-41. GSA makes no mention of its work with FEMP to label FEMP designated products on their website, although there are FEMP-designated products offered on GSA Advantage!.

Challenges in Tracking, Monitoring, and Reporting

In addition to articulating the goals that agencies must meet, E.O. 13514 also emphasized accountability and transparency in tracking agency progress towards meeting those goals. By far, the most common barriers articulated across the SSPPs reviewed were the lack of both mechanisms to track procurement data and internal processes to monitor and report on those data.

A few quotes directly from SSPPs articulate the level of need in these areas:

- “We (HHS) do not currently have reporting mechanisms in place to account for measuring the universe of relevant acquisitions, much less to the specificity of the different categories listed.”⁴⁴
- “GSA does not have metrics or reporting processes in place to track agency status and progress against the 95% sustainable acquisition goal.”⁴⁵
- “VA, along with other federal agencies, faces a tremendous challenge when it comes to meeting goals for sustainable acquisition. It is extremely difficult to track the sustainable attributes of each agency purchase.”⁴⁶

Agencies face huge challenges as they develop monitoring and tracking mechanisms to report progress in meeting sustainable procurement requirements. In addition, assessing levels of compliance will be seriously hampered if underlying data collected through agency-level mechanisms are not comparable across agencies.

In their SSPPs, agencies articulated various strategies to address the challenge of tracking, monitoring and reporting progress towards the goals.

For instance, EPA is rolling out a new acquisition system to track contracts that will include a check box that contracting officers can use if the product is green.⁴⁷ VA intends to integrate in their acquisition data

management system a series of questions on sustainable procurement and associated spending.⁴⁸ Many other agencies propose using the Federal Procurement Data System – Next Generation (FPDS-NG), a government-wide system where agencies are required to post certain purchases above the micro-purchase threshold (\$3,000). Currently, this site only collects transactional

⁴⁴ Department of Health and Human Services, Strategic Sustainability Performance Plan 2010, p. 76

http://www.hhs.gov/about/2010_hhs_sustainability_plan.pdf

⁴⁵ General Service Administration, Strategic Sustainability Performance Plan 2010, p. 29.

⁴⁶ Department of Veteran Affairs, Strategic Sustainability Performance Plan 2010, p. 36,

<http://www.green.va.gov/docs/2010VAsspp.pdf>.

⁴⁷ Environmental Protection Agency, Strategic Sustainability Performance Plan 2010, p. 52.

⁴⁸ Department of Health and Human Services, Strategic Sustainability Performance Plan 2010, p. 76.

information, not line item data on specific products or services purchased.⁴⁹ DOD in its SSPP proposes changes to FPDS-NG to include criteria for tracking sustainable procurement.

Also, DOD, GSA and EPA made reference in their SSPPs to mechanisms for monitoring vendor performance in meeting sustainable acquisition goals. EPA established processes in FY2009 to conduct regular oversight of contract compliance with its Green Purchasing Plan, including collection of vendor certifications and review of data integrity.⁵⁰ DOD intends to establish similar auditing protocols, and in addition, proposes adding language to the Defense Federal Acquisition Regulation (DFAR) that make vendor performance evaluations contingent on compliance with sustainable acquisition regulations.⁵¹ GSA intends to integrate procedures in its post-award evaluation to require vendors to provide evidence of compliance for products listed as environmentally-preferable on GSA Advantage!.⁵²

Will any of these proposed systems and procedures deliver EE purchasing data with the detail necessary to assure accountability and transparency in reporting sustainable acquisition? What is the level of detail necessary, and who should define it? How will one agency's monitoring and reporting efforts be comparable to other agencies if the underlying data are not consistent? The level of detail in the SSPPs was insufficient to answer these questions, but assuring the uniformity of data reported at the interagency level in terms of sustainable acquisition is an important issue that FEMP and the other agencies implementing sustainable procurement need to address.

IV. Observations and Recommendations

The results of the 2010 review reveal some increase over 2008 in the level of awareness and implementation of EE procurement requirements by federal agencies. However, weaknesses in the application of compliance language, knowledge gaps among agency personnel and needs revealed in agency SSPPs indicate that five years after the passage of EAct 2005, the potential economic and environmental benefits of the program are still not fully realized. The Alliance makes four main recommendations to FEMP to address the findings we identified in this study:

⁴⁹ The FPDS-NG collects data on contracts for all purchases above the "micro-purchase" threshold, which is, for most agencies, \$3,000 for products and \$2,500 for services. At a minimum, agencies must report on contract actions above the threshold, regardless of the solicitation process. These include all definite contracts and indefinite delivery vehicles. GSA must also report its Federal Supply Schedules, and the Office of Charge Card Management must report on government-wide purchase card transactions to FPDS-NG on a yearly basis. According to the FPDS-NG site FAQ's, agencies must report on purchase card transactions over the micro purchase threshold. The database is searchable for agency contracts by product type and can access information on the award amount, the awardee, the contracting agency office, but there are no line item details on what was actually purchased.

⁵⁰ EPA, *op.cit.*, p. 22.

⁵¹ DOD, *op. cit.*, p. II-35 & 36.

⁵² GSA, *op.cit.*, p. 2-40.

- FEMP should work cooperatively with federal agencies to help them develop EE strategic implementation plans to guide their activities.
- FEMP needs to build stronger partnerships with federal supply sources, vendors and other agencies implementing sustainable acquisition requirements to maximize the impact of program resources.
- Increased FEMP resources should be dedicated to program marketing, improving guidance on contract compliance and an expanded emphasis on maximizing the savings potential of the EE procurement program.
- FEMP should direct increased resources to promoting personnel training, updating product technical specifications, improving acquisition planning and monitoring compliance.

In the following section, the Alliance outlines the major observations from the study that inform these main recommendations. The Alliance also provides suggestions for activities for FEMP to undertake that it believes can accelerate agency progress towards meeting EE procurement regulations and increase the energy and cost savings achieved by the program.

The Alliance acknowledges that FEMP and other agencies may be addressing some of these issues to various degrees. These observations simply assess the status at this moment in time.

- **FEMP should work cooperatively with federal agencies to help them develop EE strategic implementation plans to guide their activities.**

Observation #1: Federal agencies lack a comprehensive approach to implementing EE procurement requirements within their organizations.

The Alliance's main recommendation is that FEMP should offer assistance to each agency, beginning with the largest by purchase volume, to develop a strategic implementation framework that will better leverage agency resources and address opportunities to accelerate agency compliance with the EE procurement regulations.

With limited resources to carry out the EE procurement requirements, agencies must think strategically about which activities will best address the obstacles to compliance. A well-written plan would designate strategic activities based on specific, measurable goals. It can help agencies think more comprehensively about how to achieve and maintain compliance. It would provide a roadmap to achieve the EE procurement goals and a foundation to evaluate progress, while facilitating transparency and the sharing of best practices among agencies.

A possible template for these strategic implementation plans, to address many of the obstacles identified above, could include:

- Definition of a structure for agency-wide collaboration
- Interagency collaboration on defining standards for compliance
- Unification of policy, guidance and procedures

- Outreach and communications planning
- Improvement of acquisition planning tools and systems
- Education and training initiatives
- Vendor engagement efforts
- Building of tracking, monitoring and reporting mechanisms

Again, this list is meant to be suggestive rather than comprehensive. FEMP can lead a collaborative interagency effort to define strategic areas of importance and best practices to incorporate into a plan template, and help agencies design their own timeframe for plan implementation and review.

➤ **FEMP needs to build stronger partnerships with federal supply sources, vendors and other agencies implementing sustainable acquisition requirements to maximize the impact of program resources.**

Observation #2: Vendor relationships are not fully leveraged to reinforce agency compliance.

Vendor engagement on compliance issues was a need highlighted in the previous 2008 review and one that persists today. The latest review revealed weaknesses in how EE procurement language is applied to solicitations. Several times in reviewing solicitations, the product specifications did not meet FEMP or ENERGY STAR performance criteria but the more generic EE procurement requirements were included in the contract clauses section of a solicitation. Contradictions such as these put vendors in the difficult position of either meeting product specifications, or risking loss of a bid if the product offerings are upgraded to meet a general criterion of energy efficiency. FEMP should provide guidance to agencies on how they can work more effectively with vendors to communicate requirements and improve compliance.

In addition, there may be cases where a compliant solicitation document ultimately does not lead to delivery of a compliant EE product. While there are examples of mechanisms to confirm delivery, they often focus on meeting procurement requirements other than energy efficiency.⁵³ Existing mechanisms could be adapted to integrate EE procurement objectives and be used to require vendors to provide information confirming that compliant EE products are actually delivered. Other information that vendors can provide are accessible lists of their compliant products.

⁵³ Though the review of solicitations for mechanisms to confirm the delivery of compliant products was outside the scope of this study, the Alliance came across eight solicitations that included compliance confirmation mechanisms – all in service contracts. Most were “submittal registers,” documents that require vendors to submit product information for approval by the contracting officer. These registers rarely included requirements to confirm EE procurement compliance, although other environmental acquisition requirements were often present. Other mechanisms focused on sustainable acquisition objectives. For instance, as a part of its Affirmative Procurement Program GSA included a very detailed form in the solicitation for vendors to report the percentage of recovered content of certain products and their dollar value.

Working more closely with vendors can relieve a significant part of the compliance burden on agencies. Unfortunately, few of the agency SSPPs reviewed acknowledged this potentially fruitful opportunity. The following activities, and others, should be part of an overall FEMP and interagency strategy for vendor outreach, information and training on the EE procurement requirements.

Suggested activities:

- *Build a vendor outreach strategy:* Based on vendor interviews, focus groups, and perhaps a published Request for Information, FEMP should identify potentially interested vendors, manufacturers, and industry associations. FEMP could then schedule periodic workshops and other means of communicating with interested federal suppliers (such as a newsletter, presentations at industry meetings, or a dedicated part of the FEMP website) both to communicate the federal EE procurement requirements to suppliers and to solicit their views on proposed new product specifications. These outreach efforts could build on the relationships established with ENERGY STAR partners.
- *Conduct a market assessment and survey of vendor awareness and attitudes.* The initial step to engaging vendors on compliance issues is to conduct an assessment of current levels of awareness of the EE procurement requirements among vendors, identify obstacles to vendor compliance and gauge vendor attitudes towards the current effectiveness of communication by federal agencies regarding EE procurement. This approach could also involve a market assessment to identify the major federal vendors and market distribution channels for EE products covered by ENERGY STAR and FEMP designation. This information would inform vendor-focused outreach activities.
- *Promote mechanisms to confirm delivery of compliant products:* FEMP should encourage the agencies to develop and use mechanisms to require vendors to confirm the delivery of EE products. Where possible, existing mechanisms should be adapted to include EE procurement requirements and featured as best practices on the FEMP procurement website.
- *Encourage vendor compliant supply catalogs:* FEMP should encourage vendors and manufactures to position themselves as suppliers of compliant EE products and, in cooperation with GSA and DLA, could develop a process for certifying such vendors. Special recognition could be given to vendors who have created their own on-line catalogs of compliant product offerings, verified as compliant by FEMP.⁵⁴
- *Create enforcement/incentive procedures to encourage vendor compliance:* FEMP can motivate vendor compliance by working with the federal supply agencies to create an auditing process to confirm the accuracy of vendor and manufacturer-provided information on the delivery of compliant EE products and product lists.

⁵⁴ FEMP currently positions GSA and DOD as Federal supply sources for compliant products on its website. FEMP might consider removing these references until the agencies fully meet their obligations under the law.

- *Design resources for vendors:* FEMP should design an expanded suite of vendor-focused information tools and resources to provide useful information to vendors on how to comply with requirements. These might include a vendor toolkit/guide, a dedicated vendor webpage and a help hotline.

Observation #3: Compliance by federal supply sources is still a work in progress.

Five years after the passage of EPAct 2005, the two main federal supply sources, GSA and DLA, are not in full compliance with the law. As discussed in the review of GSA and DOD's SSPPs, both supply agencies are obliged under EPAct 2005 to clearly list and supply only compliant products to their federal customers. The Alliance found in its 2008 review that GSA and DLA failed to sell any compliant models in 65% and 80% of the covered product categories, respectively.⁵⁵ Although a follow-up review of GSA and DLA's compliance with this requirement was outside of the scope of the present study, the agencies' SSPPs reveal inadequate attention to meeting this requirement. Even a cursory review of products currently offered on GSA Advantage! reveals non-compliant products still being sold, and that the designation of efficient ENERGY STAR and FEMP products is imperfect and incomplete.⁵⁶ There is no doubt that fully meeting this statutory requirement is a huge undertaking, but GSA and DLA should move more aggressively towards compliance.

Compliance by the two largest federal supply agencies will ease the burden on agency personnel to identify EE products at the point-of-purchase. While the ENERGY STAR program, as a labeling program, provides qualified product lists that can facilitate the efforts of GSA and DLA to properly designate products, FEMP does not currently have a list of compliant products for the product categories it covers. Several agency personnel interviewed reiterated the importance of up-to-date product lists in easing the burden of compliance.

Suggested activities:

- *Continue to monitor progress by GSA and DLA in moving towards full compliance with EPAct 2005.* FEMP should continue to periodically review GSA and DLA online supply catalogs for the accuracy and completeness of their on-line designation of EE products. Another alternative would be for the supply agencies themselves to conduct internal audits on a regular basis, and make the results available to OMB, FEMP and their customer agencies.
- *Establish a list of products compliant with FEMP EE specifications.* To ease the burden on GSA and DLA and agency personnel in identifying compliant products, FEMP should maintain complete and current lists of compliant products in all categories not already covered by the ENERGY STAR product lists. FEMP can draw on its experience in creating lists of compliant low-standby-power products in response to the requirements of EISA

⁵⁵ Capanna *et al.*, "A Review of Federal Agency Compliance with Energy-efficient Procurement Laws," p. 3

⁵⁶ For instance, during the time research was being conducted for this report in mid-2010, restroom hand dryers were listed as FEMP-compliant. Hand dryers are not a product category designated by FEMP (nor by ENERGY STAR for that matter).

2007.⁵⁷ FEMP can maximize its limited resources by extracting data from existing lists of energy-consuming products lists maintained by others, including industry associations and the DOE appliance standards program. Regularly updated product lists have been identified for number of product categories specified by FEMP including commercial lighting, chillers, ice machines, water heaters, commercial boilers, pre-rinse spray valves, and low-flow plumbing fixtures.⁵⁸

Observation #4: Streamlining federal guidance for sustainable procurement is needed in order for agencies to efficiently and effectively meet requirements.

There are numerous examples of different sustainable procurement programs across the government, with names such as Affirmative Procurement and Green Procurement, which create a web of overlapping guidance and reporting mechanisms.⁵⁹ Navigating the requirements of these programs must be a challenge to individual procurement officials and vendors alike. In addition to creating a burden on agency personnel to comply with myriad requirements, many programs while focusing on a diverse set of environmental attributes (recycled content and bio-based products in particular) in many cases omit any reference to buying EE products.⁶⁰

In their SSPPs, agencies signal strong intention to streamline current guidance to relieve the burden on agency personnel to navigate the sea of tools and language focused on individual attributes. The Alliance sees this as an important opportunity for FEMP to build compliance with EE procurement requirements and leverage the efforts of the other implementing agencies to promote sustainable procurement.

FEMP should also assure that revisions to sustainable procurement guidance maintains suitably strong focus on compliance with the EE procurement requirements that are statutorily mandated, based on clear and measurable metrics, and capable of delivering direct and tangible fiscal benefits to agencies.

Suggested activities:

- *Coordinate sustainable acquisition strategy with implementing agencies and OMB.* FEMP should work with OMB and implementing agencies to identify opportunities for joint implementation of sustainable acquisition requirements and to consolidate and streamline

⁵⁷ Section 524 of EISA 2007 required DOE to create a publically accessible list of cost-effective eligible products that meet the standby power requirements.

⁵⁸ Entities that maintain energy-consuming products lists include the California Energy Commission, Consortium for Energy Efficiency, the Air-conditioning, Heating and Refrigeration Institute, the Food Service Technology Center, EPA Water Sense, the National Electrical Manufacturers Association, and a number of product manufacturers.

⁵⁹ Halchin, L.E.; Manuel, K. "Environmental Considerations in Federal Procurement: An Overview of the Legal Authorities and Their Implementation," Congressional Research Service, April 2010, p. 13,

<http://www.fas.org/sgp/crs/misc/R41297.pdf>

⁶⁰ Two of the GSA solicitations we reviewed referred to its Affirmative Procurement guidelines. GSA's submittal forms only addressed the Federal requirement to procure bio-based products and products with recycled content.

guidance where possible – but without diluting the clear *statutory* requirements unique to EE procurement.

- **Increased FEMP resources should be dedicated to program marketing, improving guidance on contract compliance and an expanded emphasis on maximizing the savings potential of the EE procurement program.**

Observation #5: The EE Procurement program has relatively low visibility as a federal sustainability objective.

It was outside the scope of this study to compare the level of integration in contract actions of EE procurement and other sustainable acquisition attributes. However, the Alliance observed that EE procurement requirements were omitted from most references we found to “green procurement” program requirements. Overall, we found that the EE procurement language had a relatively low profile in contract solicitations relative to the requirements for bio-based and recycled content products. Of the 22 agency personnel interviewed, only two were aware that FEMP had its own product specifications.

The low levels of compliance and awareness, coupled with the general lack of familiarity with FEMP designated products, suggest the need to significantly expand current outreach efforts. As the DOE Inspector General report indicated, FEMP had inadequate resources dedicated to maintaining up-to-date product specifications; the same limitation may have affected outreach and training.⁶¹ The need for additional training efforts was also addressed in our 2008 report.

Assuming that FEMP may continue to face the realities of restricted budgets in the immediate future, there are still activities that FEMP can undertake to raise the profile of EE procurement and to assist agencies.

Suggested activities:

- *Develop a comprehensive outreach strategy for EE procurement.* FEMP should concentrate its limited resources on the greatest opportunities to increase awareness of EE procurement requirements, and design more effective communication channels for individual target audiences.
 - *Communication network for disseminating product updates:* An important part of the outreach strategy will be to develop a more effective network for disseminating product specification updates. For instance, a specification update for a FEMP-designated or ENERGY STAR product can be announced with simultaneous notices in the Federal Register, the FEMP and DOE Energy Efficiency and Renewable Energy

⁶¹ DOE Office of the Inspector General, “The Department of Energy’s Program to Assist Federal Buyers in the Purchasing of Energy-Efficient Products,” April 2010, OAS-RA-1-08, p. 11, <http://energy.gov/sites/prod/files/igprod/documents/OAS-RA-10-08.pdf>.

- websites, and through an email alert sent directly to a network of agency contacts who can further disseminate this information within their agencies.
- *Creating a consistent presence at strategic events:* There is a need to assure a consistent presence for the EE procurement program at events such as conferences on government sustainability and acquisition in order to elevate its profile among many other government policy initiatives. Beginning with its own annual GovEnergy conference, FEMP can mount a sustained effort to incorporate EE procurement topics in event agendas and to recommend speakers and session moderators.
 - *Other avenues for outreach:*
 - You Have the Power Campaign.⁶²
 - Re-establish a specific category for EE Procurement as part of DOE's Federal Energy and Water Management Annual Awards.
 - *Facilitate dialogue within and among agencies:* FEMP can continue its efforts to improve the intra-agency dialogue on EE procurement issues. One approach would be for FEMP to help interested agencies establish "procurement leadership councils" with representation from all major groups within the agency that influence EE procurement: procurement and contracting personnel, sustainability specialists, end-users, training providers, and product vendors. The intent would be to engage agency senior leadership, raise the profile of energy efficiency procurement regulations at all levels of management, and build a sense of shared responsibility among all personnel. FEMP could also work with members of the EE Procurement Interagency Working Group to encourage intra-agency collaboration and to share best practices at the interagency level.

Observation #6: Inconsistent integration of contract language in solicitations sends mixed messages to vendors about federal EE procurement requirements.

Communicating effectively with vendors is essential to improving compliance with federal EE procurement requirements and helping to move the economy as a whole towards more EE products. There was significant evidence in the review that compliant language is being applied inconsistently among and within agencies and that language incorporated in product technical specifications was most likely to lead to successful implementation of EE procurement requirements.

Suggested activities:

- *Clearly define "compliance":* FEMP needs to provide more specific guidance on what it considers sufficient integration of the EE procurement regulation into solicitation and contract actions. Providing correct product specifications and including mechanisms to confirm and enforce the delivery of compliant products would be, in the Alliance's opinion,

⁶² A FEMP initiative to highlight individuals and programs that are successfully tackling Federal energy management objectives. Campaign website: <http://www1.eere.energy.gov/femp/services/yhttp/index.html>

both necessary and sufficient elements. These standards for compliance should be clearly communicated to both to vendors and procurement personnel.

- *More guidance on how to comply:* FEMP could encourage improved compliance language in solicitations by providing step-by-step guidance for contracting officers. This guidance should, at a minimum, include these three steps: 1) Finding energy performance specifications for the products requested; 2) Integrating specifications and model contract language into solicitations and 3) Confirming the delivery of compliant products. For example, a “how to comply” page on the FEMP procurement website could outline clear steps to building effective solicitation documents, along with links to real examples, model language, and other resources already available on the site. This “how to” guidance could also be turned into a toolkit or handout for wider dissemination.

Observation #7: There are additional opportunities to maximize federal energy savings through the EE procurement program by expanding covered product categories and encouraging agencies to buy “top-tier” efficient products.

Agencies have the potential to maximize energy and cost savings by choosing not just a minimally compliant EE product, but in many cases products that significantly exceed that required level of efficiency. Both FEMP and ENERGY STAR set their performance specifications at approximately the top 25% of the market in terms of energy efficiency. By aiming instead for the “best of the best,” federal agencies can increase energy savings while – in many cases – still meeting life-cycle cost-effectiveness criteria. To help consumers in identifying these products, ENERGY STAR will be launching a program in early 2011 to identify the top-tier of efficient products, starting initially with a handful of product categories.⁶³

In addition to maximizing energy savings by selecting top-performing products from designated product categories, there are additional energy savings opportunities for federal agencies from product categories currently not designated yet commonly purchased. The Alliance noted numerous solicitations for energy-consuming product types not designated by FEMP or the ENERGY STAR program, and therefore not bound by the regulation. These fell into at least three categories: installed equipment (e.g. air-handling units, walk-in refrigerators); specialized equipment (e.g. medical and food service equipment); and product types not covered in designated categories (e.g. tankless *electric* water heaters). Extending the scope of energy-efficient federal procurement to include more products is often a matter of program resources. As a part of its recommendations, the DOE Inspector General recommended that FEMP do more to pursue efficiency specifications for new product categories.⁶⁴

⁶³ The ENERGY STAR “most-efficient” products website is http://www.energystar.gov/index.cfm?c=most_efficient.me_index; the initial proposal is posted at http://www.energystar.gov/ia/partners/downloads/Top_Tier_Stakeholder_Proposal.pdf.

⁶⁴ DOE Office of the Inspector General, op. cit., p. 3.

Suggested activities:

- *FEMP should consult with federal agencies and the ENERGY STAR program to create guidance and technical assistance resources on buying the most efficient products available.* FEMP can also assist this process by expanding its existing energy-saving calculators to help agencies estimate energy and cost savings from top-tier efficient products, and could recognize agency leadership in moving toward top-tier purchasing.
- *FEMP should continue consultations with agencies, vendors, and DOE's own RD&D programs to identify new EE product categories and develop new purchasing specifications.* Sources of information could include agency purchasing of energy-consuming products not specified by ENERGY STAR or FEMP programs; focus groups of agency end-users and procurement personnel; monitoring of R&D and "Emerging Technology" projects; and consultation with manufacturers, suppliers, and industry leaders.

➤ **FEMP should direct increased resources to promoting personnel training, updating product technical specifications, improving acquisition planning and monitoring compliance.**

Observation #8: Few agencies have comprehensive EE procurement training programs.

Though a complete assessment of agency training programs was outside the scope of this study, from the Alliance's interviews and reviews of agency SSPPs there emerged a clear need for more comprehensive personnel training programs on EE procurement requirements. While the proposed approaches to sustainable acquisition training in the SSPPs reviewed indicate a larger commitment to workforce training on sustainable acquisition, most plans were focused narrowly on procurement personnel (omitting specifiers and end-users) and did not provide detail on regularly scheduled training to address staff turnover. Further, in interviews with personnel, three agency contracting officers we interviewed indicated they had received some training on EE procurement. Only one said that this training was required and was regularly offered. None of the end-users we interviewed had received such training.

A much wider array of personnel must be engaged in regular training programs. This is especially true for personnel who directly influence procurement processes and decisions: from higher-level officials who set agency priorities and issue acquisition policies, to those who request, specify or purchase products through the variety of procurement channels. In order to address personnel turnover, regularly repeated training is necessary. Training must go beyond basic awareness to include the skills and information necessary to correctly specify compliant products for contract solicitations or be able to identify these products in the marketplace.

Suggested activities:

- *Define core competencies for EE procurement.* In consultation with GSA, DLA, and other agencies, FEMP should provide guidance on what levels and types of knowledge are

necessary to fully comply with EE procurement requirements. Defining core competencies for different personnel will facilitate consistent training efforts within and among agencies.

- *Develop training presentations and accompanying tools and handouts.* Agencies need access to training that goes beyond general awareness and can guide personnel step-by-step through the process of integrating energy efficiency requirements into their procurement actions. Once core competencies are defined, FEMP can work with other agencies to design a suite of training, acquisition tools and handouts targeted to different personnel and different acquisition types, and make these tools available on the FEMP website.
- *Integrate EE procurement skills into federal acquisition workforce training.* FEMP should continue its efforts to coordinate with the OMB's Office of Federal Procurement Policy and organizations such as the Federal Acquisition Institute and Defense Acquisition University to work towards integration of core competencies in EE procurement into basic training for the federal acquisition workforce.

Observation #9: Inadequate acquisition planning tools and systems contribute to non-compliance.

Interviews with agency personnel indicate the need to integrate EE procurement requirements in the acquisition plans, automated systems and other tools designed to help agency personnel build compliant solicitations. The SSPPs we reviewed made no mention of the opportunities to ease the burden of compliance on procurement personnel by helping them more consistently integrate compliance language into solicitations.

Suggested activities:

- *Conduct an inventory of acquisition tools and systems.* FEMP should collaborate with individual agencies to conduct an inventory of acquisition tools and systems, identify best practices and further opportunities to integrate EE procurement objectives, establish a plan to update those systems to adequately reflect the requirements, and monitor the impact of these changes.

Observation #10: Agency construction and product specifications do not effectively address EE procurement requirements.

According to FEMP, energy costs for the 500,000 buildings that the federal government oversees average \$7 billion annually.⁶⁵ The Alliance found levels of non-compliance and partial compliance in solicitations for major construction and renovation projects where installation of energy-using equipment was embedded in project specifications.⁶⁶ Considering that some energy-consuming

⁶⁵Department of Energy/Federal Energy Management Program, "Federal Leadership in High Performance Sustainable Buildings," April 2010, p. 1, http://www1.eere.energy.gov/femp/pdfs/femp_hpsb.pdf.

⁶⁶ There was non-compliance for both installed equipment, which is an integral part of the building system covered by building energy codes, and for plug-in equipment furnished as part of a project even though not physically installed during construction. For commercial buildings, installed equipment subject to the energy-efficient procurement requirements includes chillers, boilers, rooftop unitary air conditioners, electric motors, non-residential fluorescent

equipment installed as a part of these projects can have a life of 15-20 years, buying the most EE equipment can have an important impact on federal agency energy bills for years to come. Furthermore, according to law all procurements for energy-consuming products, both direct and through contracts for construction, renovation, maintenance, or operating services are subject to the requirements of EAct Section 104.⁶⁷

The Alliance believes the problem is two-fold. First, until recently DOE had not addressed energy efficiency requirements for installed equipment in its rulemaking on energy efficiency standards for new commercial, multi-family high-rise and low-rise residential federal buildings.⁶⁸

Second, construction guide specifications used by federal agencies are not updated regularly enough to reflect the most current efficiency levels for equipment specified by the FEMP and ENERGY STAR programs. For instance, one solicitation included technical specifications for skylights that were at least six years-old (pre-dating EAct 2005).

This issue extends beyond construction guide specifications to agency-specific technical specifications that must be used for a variety of energy-consuming products. In its SSPP, DOD acknowledges that many times personnel other than those conducting procurement actions are

and HID lighting, and “cool” roofing. For residential buildings, covered products installed as part of design and construction include furnaces, boilers, air conditioners, heat pumps, residential lighting, dishwashers, windows. Examples of non-installed (plug-in) equipment furnished as part of a residential building include refrigerators and other appliances. These appliances, while not covered by building energy codes, are often part of specifications for construction/renovation projects and still must meet EE procurement mandates.

⁶⁷ Section 104 (a) of EAct 2005 explicitly requires that solicitations for larger contracts (e.g., construction, renovation, and service or maintenance contracts) that include provisions for energy-consuming products integrate ENERGY STAR and FEMP technical requirements into specifications.

⁶⁸ In official comments to a DOE notice of proposed rulemaking on “Energy Conservation Standards for New Federal Commercial and Multi-Family High-Rise Residential Buildings and New Federal Low-Rise Residential Buildings” in 2007, the Alliance argued that reference to Section 104 of EAct 2005, which requires that all equipment specified and installed in federal construction or renovation projects must meet ENERGY STAR® or FEMP-designated energy efficiency criteria, should be included in federal building standards. DOE rejected the original comments in their Final Rule issued in December 2007, offering this explanation: “DOE does not believe that it is appropriate to address receptacle loads in the Federal building Standards.” The Alliance believes that DOE misunderstood the intent of the original comments. The inclusion of Section 104 in federal building standards was intended not to address receptacle loads, but installed equipment that is integrated into the design of new construction or major renovation of federal facilities and that is covered by the building code upon which the rule is built. The Alliance reiterated its comments for the May 2010 notice of proposed rulemaking related to the 2007 final rule. A more complete discussion of the Alliance’s view on this issue can be found on public comments listed on www.regulations.gov for Final Rule, *Federal Register*, 72 FR 72565, 10 CFR Part 433, 434, and 435, December 21, 2007 and Notice of Proposed Rulemaking, *Federal Register*, 75 FR 29933, 10 CFR Parts 433 and 435, May 28, 2010.

Most recently, DOE updated the standard for non-residential federal buildings to conform with the updated ASHRAE 90.1-2010 standard. In this latest rulemaking DOE does mention the requirements for specifying FEMP-designated and ENERGY STAR mechanical equipment, lighting, and appliances for federal new construction and major renovations and points out that “This equipment is generally more efficient than the corresponding requirements of ASHRAE Standard 90.1–2010, and may be used to achieve part of the savings required of Federal building designs.” (*Federal Register* 78:131, July 9, 2013, pp. 40945 *et seq.*; <https://www.federalregister.gov/articles/2013/07/09/2013-16297/energy-efficiency-design-standards-for-new-federal-commercial-and-multi-family-high-rise-residential#-9>). As of August 2013, DOE had not yet issued an updated version of the efficiency standards for federal residential buildings, corresponding to the IECC-2012 model energy code.

responsible for technical specifications that find their way into solicitations. The Department indicates its intention to assure that those responsible for maintaining and updating agency specifications will address sustainable procurement requirements, beginning with EE procurement specifications.⁶⁹

Suggested activities:

- *FEMP should cooperate with specifying authorities at federal agencies to update EE specifications and incorporate them in equipment and construction contracts.* FEMP should develop ongoing relationships with federal technical specifying authorities to keep them informed of updates to EE product specifications, and provide support in integrating these updates into technical specifications for equipment and construction projects. These should include continuing efforts to assure that Unified Facilities Guide Specifications, military construction (MilCon), and other construction specifications used by federal agencies are updated regularly to reflect current energy-efficiency requirements for products. Energy efficiency criteria should be coordinated with the initiatives of the EPA and the Office of the Federal Environmental Executive to promote the integration of both efficient and “green” requirements into construction guide specifications.
- *Energy efficiency and sustainable design standards for new federal construction and major renovation projects should include reference to EE procurement requirements.* DOE should revise its rule on energy efficiency in federal residential construction to include explicit reference to Section 104 of EPCA 2005 and its energy efficiency requirements for energy-consuming equipment in new federal construction and major renovation projects.

Observation #11: There are limited mechanisms for tracking, monitoring and reporting on EE procurement.

One common issue articulated by the agency SSPPs we reviewed was the lack of mechanisms to track, monitor and report on procurement data. The Alliance also reviewed legislation, executive orders and agency guidance on federal energy management that included requirements to procure EE products. These policies mentioned several reporting mechanisms to track agency progress towards meeting federal energy management mandates, including EE procurement.⁷⁰ The EE procurement reporting requirements, if any, were mostly narrative statements on implementation of procurement processes to meet the regulation; there were no quantitative questions on purchasing volumes or on exemptions granted from the regulation.

This lack of sound quantitative data on EE products purchased is problematic if agencies are to substantiate their progress in meeting the sustainable acquisition goals outlined in E.O. 13514.

⁶⁹ DOD, *op. cit.*, P. II-34.

⁷⁰ Reports reviewed: DOE Annual Energy Report; OFPP (OMB) Annual Green Purchasing Report; OMB Annual Budget Submission; EPA Environmental Management Systems Annual Report; OMB Scorecards; and OMB Government Efficiency Status Reports.

Two sustainability officials interviewed commented that without strong monitoring and reporting mechanisms, agencies have little reason to develop sophisticated tracking systems or to assure compliance. While it is generally assumed that strong reporting mechanisms can motivate compliance, these mechanisms are only as good as the underlying data. Establishing procurement tracking systems that include product-level detail is an extremely challenging, yet necessary part of moving agencies towards full compliance with procurement requirements.

Suggested activities:

- *Assuring the integrity of EE procurement data.* FEMP should commit to an ongoing effort to improve underlying data collection processes and standards that will allow for meaningful reporting of agency progress in meeting EE procurement goals. A good place to start is collaborating with GSA and DOD to incorporate changes into the FPDS-NG that will allow for the collection of line-item data on energy-using (and other sustainable) products.
- *Focus initially on high-impact data collection activities.* FEMP can work with DLA, GSA and large vendors to develop mechanisms to extract EE procurement information from data already encoded in their online “e-procurement” systems. Similarly, reporting requirements can be integrated into some vendor contracts, beginning with the scope of work for competitive bidding.
- *Establish procedures for handling exceptions to EE procurement mandates in accordance with the law.* As discussed in the background section of this report, DOE issued final guidelines on the EE procurement requirements in 2009, but omitted the proposed reporting requirement for each agency to record and report exemptions to this provision as required by law. The DOE Final Rule cited the adequacy of existing reporting mechanisms to monitor agency progress in implementing the EE procurement requirements.⁷¹ Contrary to DOE’s position in its Final Rule, the Alliance does not consider existing reporting mechanisms to be adequate for monitoring agency progress toward meeting EE procurement requirements. In consultation with OMB and the affected agencies, FEMP should reconsider establishing a process for reporting agency claimed exemptions to the EE procurement requirements.
- *Continue FEMP monitoring of agency progress towards meeting EE procurement requirements.* One way to increase attention to EE procurement requirements by agency management is through regular monitoring of agency progress. FEMP should continue and expand its efforts to review a sample of procurement actions at all stages of the process: procurement planning, contract solicitation, contract award, and post-award contract fulfillment. Procurement monitoring activities could include review of:

⁷¹ Notice of Proposed Rulemaking, *Federal Register*, 72 FR 33696, 10 CFR Part 436, June 19, 2007, “Federal Procurement of Energy-efficient Products,” p. 33697, http://www1.eere.energy.gov/femp/pdfs/72_fr_33696.pdf and Final Rule, *Federal Register*, 74 FR 18030, 10 CFR Part 436, March 13, 2009, Federal Procurement of Energy-efficient Products, p. 10831, http://www1.eere.energy.gov/femp/pdfs/74_fr_10830.pdf

- Annual procurement plans of high-volume agencies⁷²
 - Energy Saving Performance Contracts and Utility Energy Service Contracts
 - Operations and maintenance services contracts
 - Indefinite Quantity/Indefinite Delivery contracts
 - Blanket Purchase Agreements
- In addition, a periodic assessment of procurement officials' awareness and familiarity of EE requirements would be useful as an interagency exercise, both in the near future to establish a baseline and then repeated on a periodic basis.
 - *Help agencies develop their own compliance monitoring efforts based on existing practices.* Many agencies in their SSPPs mention the need to develop compliance monitoring procedures to track their progress towards meeting the requirements. FEMP can help build a consistent compliance review process across agencies by promoting adoption of existing solicitation review methods, and helping agencies establish and conduct their own monitoring efforts.

IV: Conclusions

As the largest purchaser of energy and energy-consuming products in the country, the federal government can achieve annual energy savings of around \$200 million⁷³ by directing procurement to EE products as required by law. By expressing preference for these cost-effective products, the federal government is also providing an incentive among producers competing for a share of the federal market to develop more efficient technologies. The result can be significant improvement in the availability, performance and affordability of EE products which is a benefit not only to federal buyers, but also to consumers at large.

Although federal agencies have been required to purchase EE products since the passage of EPAct 2005, this study has revealed that agencies face significant challenges to meeting this requirement. However, as the Alliance outlines in its recommendations and suggested activities, there are abundant opportunities for FEMP to help agencies overcome these challenges.

⁷² US Code, 15 U.S.C. 637(a)(12)(c) requires Federal agencies who purchase \$50 million to prepare a forecast of expected contract activities for the coming year. Agency procurement forecasts can be found on Acquisition Central, "Agency Recurring Procurement Forecasts," http://acquisition.gov/comp/procurement_forecasts/index.html.

⁷³ As noted above, a more recent estimate is that savings could exceed \$500 million/year.