



**US Army Corps
of Engineers®**

ENGINEERING AND CONSTRUCTION BULLETIN

No. 2013-25

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Subject: Implementation of the Energy & Sustainability Record Card and New DD 1354 Sustainability Codes

Applicability: Directive and Guidance

References:

- a. Executive Order 13514, Leadership in Environmental, Energy, and Economic Performance, 05 Oct 09.
- b. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management, 26 Jan 07.
- c. Energy Independence and Security Act (EISA) of 2007, 4 Jan 07.
- d. Energy Policy Act of 2005 (EPAct 05), 08 Aug 05
- e. Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings, Memorandum of Understanding (MOU), 06 Mar 06.
- f. Memorandum, DUSD (I&E), 25 Oct 10, subject: Department of Defense Sustainable Buildings Policy
- g. Memorandum, ASA (IE&E), 27 Oct 10, subject: Sustainable Design and Development Update (Environmental and Energy Performance).
- h. Unified Facilities Criteria (UFC) 1-200-02, 1 Mar 2013, Subject: High Performance and Sustainable Building Requirements.
- i. U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) NC certification program.
- j. UFC 1-300-08, Criteria for Transfer and Acceptance of DoD Real Property, August 2011.
- k. Resident Management System (RMS) version 2.38.2.13, dated 23 May 13.
- l. DD FORM 1354, Transfer and Acceptance of DoD Real Property, Apr 2013

1. **Purpose:** This Engineering and Construction Bulletin (ECB) provides direction and guidance on reporting compliance with multiple policies and mandates related to energy and sustainability. It also provides guidance for determining the new *Sustainability Code* used in the updated DD Form 1354 (reference l) for newly constructed facilities and existing facility renovations. This ECB is effective when issued and applies to all projects within its scope that have not achieved initial Beneficial Occupancy by the date of issuance.

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2. **Background.** The Federal Government is committed to delivering high performance sustainable buildings in all new construction and renovation efforts. Executive Orders (references a. and b.), legislation (references c. and d.), and executive policy memoranda (references e., f., and g.) have established goals and targets to advance the performance of Federal buildings. We are obligated by statute and policies to collect and report our level of compliance and demonstrate the higher performance of the facilities we design and build.

3. **Scope.** Regardless of the client service or source of funds, this directive applies to all projects *executed by USACE* that are subject to any of the referenced standards, includes over 5000 GSF of interior space, or the cost is greater than \$2.5 million. Further guidance regarding the scope and classification of projects can be found in Table 1-1 *Project/Work Type Compliance* in UFC 1-200-02 (reference h.)

4. **Policy.**

- a. Project Managers are responsible for reporting compliance with the energy and sustainability criteria periodically through all phases of the project delivery process for each facility subject to any of the mandates shown in references a. through h.
- b. The available data will be compiled using the attached Energy & Sustainability Record Card (Excel Workbook) and submitted via email by District PMs to the HQUSACE Programs Integration Division (PID) Program Manager for the Major Subordinate Command (MSC) responsible for managing the project execution. One Energy & Sustainability Record Card is required for each facility in a project. The Energy & Sustainability Record Card is designed to be a helpful tool for determining compliance as much as reporting compliance.
- c. DoD issued a new DD Form 1354 dated April 2013 (reference l), and prior versions of the DD Form 1354 are no longer applicable. The updated DD Form 1354 includes a new ‘Sustainability Code’ added as block 14. The Sustainability Code indicates whether or not a real property asset meets the sustainability goals established by DoD. The Resident Management System (RMS), reference k, was recently updated to incorporate this new version.
- d. The Energy & Sustainability Record Card Workbook is organized into the tabs described below. Each data cell is highlighted in either light green or light blue. The green cells are for user input. Blue cells are calculated or imported automatically from another cell. For example, only the *Building Description* block on the *E&S Record Card* tab is green as it requires data entry on that tab. The rest of the content on that tab is generated automatically using data entered on the other tabs and is therefore blue. The tabs of the E&S Record Card are:
 - ***E&S Record Card*** - summarizes the data into a one-page report. This report includes the overall Sustainability Code in accordance with UFC 1-200-02 § 5-3 that can be entered in block #14 of the DD Form 1354.
 - ***Building Data*** – a table for efficient entry of available data with minimal calculation required
 - ***Mandates Worksheet*** - simplifies determining the level of compliance with legislated mandates (references c and d.)

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- **HPSB Guiding Principles Worksheet** – a checklist tool that determines the level of compliance with the *Guiding Principles* (reference e.)
- **LEED Worksheet** – (OPTIONAL) a tool to assist in tracking achievable points in the USGBC LEED Certification Program (reference i.)
- **Help** – provides instructions and other references for assistance in completing the worksheets.

5. **Submissions.** Assigned Project Managers are responsible for ensuring that the Energy and Sustainability (E&S) Record Card is completed and submitted via e-mail to the HQUSACE Programs Integration Division Program Manager for the Major Subordinate Command (MSC) responsible for managing project execution. A separate E&S Record Card is required for each facility subject to any of the mandates in references a through h.

The program manager at the HQUSACE Programs Integration Division is responsible for ensuring the PMs submit their updated information in a timely manner. The Engineering & Construction Division at HQUSACE is responsible for consolidating, analyzing, quality assurance, summarizing, and reporting the collected information in coordination with the HQUSACE program manager.

The Energy and Sustainability (E&S) Record Card will be provided and updated for each facility included in the project as part of the products required during the following project activities for all active projects that have not achieved beneficial occupancy as of the date this ECB is issued. On SRM projects, Facility E&S Record Card reporting will be provided for the equivalent life-cycle step performed by USACE, as described below.

- **Concept/Parametric Design** (Code 2/3 effort) and documented in the Parametric Design Report (PDR). The E&S Record Card is a requirement of the Code 2/3 effort and will be submitted to HQUSACE as indicated above. Final design authority (Code 6/7/T) will not be provided unless E&S Record Cards for all facilities have been received.
- **100% Design** (Design-Bid-Build/Code 6/T). District PMs will provide quality assurance and include verification that an updated E&S Record Card has been submitted as part of their BCOES review and document in the BCOES Checklist.
- **Solicitation/Request for Award Authority.** The E&S Record Card will be submitted to HQUSACE with the Current Working Estimate and request for award authority and funds when source selection is complete. For Design-Build solicitations, the E&S Record Card submitted will reflect the performance proposed by the selected offeror and to be awarded in the construction contract.
- **Completion of D-B Contractor's Design** (Design-Build / Code 7). The E&S Record Card will be submitted to HQUSACE when the Design-Build contractor's design is complete, and will reflect the expected facility performance as designed.
- **Initial Beneficial Occupancy Date** (BOD). The E&S Record Card reflecting expected building performance as constructed will be provided to the installation Real Property Accountable Officer concurrent with the interim DD Form 1354 documentation, and also

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submitted to HQUSACE. Projects will not be considered BOD Actual unless the E&S Record Card for each facility been received by HQUSACE.

- **Final Turnover.** Any changes or corrections to an E&S Record Card will be submitted to HQUSACE and provided to installations along with final DD Form 1354 documentation.

6. **Training.** The Engineering & Construction Division at HQUSACE will host training webinars through the Energy and Sustainability program. Dates and details will be announced via email and on the Energy & Sustainability portal website at:

- <https://mrsi.usace.army.mil/sustain/SitePages/Home.aspx>

7. **Contact.** The HQUSACE Engineering & Construction Division (CECW-CE) point of contact is Eric Mucklow, at eric.mucklow@usace.army.mil. The Headquarters HQUSACE Military Programs Integration Division (CEMP-I) point of contact is Ana Ortega, email address ana.ortega@usace.army.mil.

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ENERGY & SUSTAINABILITY RECORD CARD

Building: **Building 12345**

SF: **150,000**

RPUID: **7654321**

Project/PA: **Tesseract Research Center**

PA: **88,000 kUSD**

Project #: **1234567**

Inst.: **USAG Humphreys - Anjeong-ri, Gyeonggi Province, Korea**

Inst. Code: **1234**

Brief Building Description / Special Energy & Sustainability Highlights:

DASHBOARD

COMPLIANCE DASHBOARD

EPAAct 2005:

EISA 2007:

Low Impact:

I:

II:

III:

IV:

V:

High Performance
Sustainable Buildings
Guiding

GP OVERALL:

Certification
Silver
LEED NC 3.0

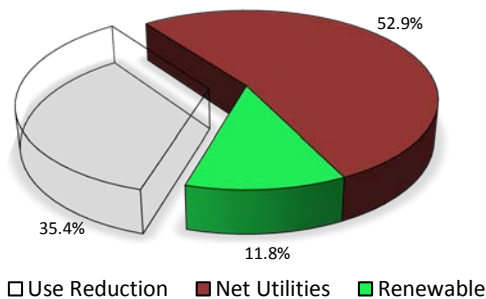
Legend:

85%-100%

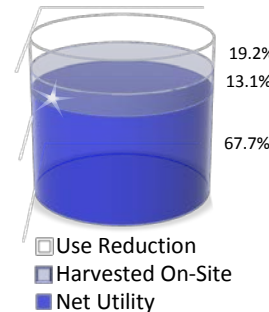
70%-85%

< 80%

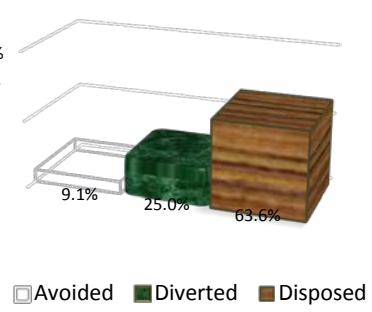
Energy Use to Baseline



Water Use to Baseline



Waste Diversion



PERFORMANCE DATA & STATISTICS

Gross Energy Intensity (kBtu/SF)

Target (40% Savings): 326.5
as Designed: **255.8**
Actual: 0.0

Fossil-Fuel Energy Intensity (kBtu/SF)

Target (65% Savings): 326.5
as Designed: **186.5**
Actual: 0.0

Water Intensity (Gal/SF)

Target (30%): 0.87
as Designed: **0.59**
Actual: 0.53

Total Energy Savings vs. Baseline:

22% Savings from 90.1-2010
(10,597,638 kBtu/yr)

Fossil-Fuel Derived Energy Savings vs. Baseline:

43% Savings from 90.1-2010
(20,992,847 kBtu/yr)

Renewable Energy Production:

18% of Total Energy Demand
7,083,068 kBtu produced per year

Water Savings vs. Baseline:

32% Savings from IPC 2006
42,000 gallons/yr

Annual Energy Usage (kBtu)

%	Baseline	Model	Actual
Annual Energy Demand:			
100%	48,969,976	38,372,339	0
Fossil-Fuel Derived Energy Consumption:			
73%	48,969,976	27,977,129	0
Non-Renewable, Non-Fossil-Fuel Energy:			
9%	0	3,412,141	0
Net Renewable Energy Used On-Site:			
18%	0	6,983,068	0
Renewable Energy/RECs Exported Off-site:			
	0	100,000	0

POC: Name, Symbol Phone: 800-555-1224 eMail: POC.Name@USACE.Army.Mil

1-Apr-13