



**Environmental Management Consolidated  
Business Center and Small Sites  
Sustainability Assistance Plan**

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## EXECUTIVE SUMMARY

The U.S. Department of Energy Environmental Management Consolidated Business Center (EMCBC) and Small Sites are committed to excellence in environmental stewardship. The EMCBC and Small Sites sustainability initiatives are comprehensive and incorporates life cycle environmental considerations into key aspects of the decision making process. A key part of the EMCBC and Small Sites approach to Environmental Management Systems (EMS) is sustainable environmental stewardship practices which enhance protection of air, water, land and other natural and cultural resources affected by U.S. Department of Energy (DOE) operations.

Clean energy and sustainability have long been at the core of the mission of the DOE and are reinforced in Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*. DOE has articulated its key strategies and goals in its Strategic Sustainability Performance Plan (SSPP), *Discovering Sustainable Solutions to Power and Secure America's Future*. The EMCBC and Small Sites Sustainability Assistance Plan incorporates these strategies as part of this overall plan.

The purpose of this EMCBC-Small Sites Sustainability Assistance Plan (SAP) is to identify a set of key sustainability focus areas for which the EMCBC and Small Sites will continue to develop strategies, opportunities, tools and processes to better achieve the goals as established by:

- Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, October 5, 2009.
- Executive Order (EO) 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, January 26, 2007.
- DOE Order 430.2B, *Departmental Energy, Renewable Energy, and Transportation Management*, February 27, 2008.
- Energy Independence and Security Act (EISA) of 2007, section 432 ( Title 42 *United States Code* Section 8253[f]).
- The Energy Policy Act (EPAAct) of 2005, Public Law 109-58.

The EMCBC and Small Sites mission is to perform closure of EM sites while ensuring the future protection of human health and the environment. The EMCBC and Small Sites have developed a Sustainability Core Team (SCT) to support continued progress towards achieving the goals set forth by the previous defined orders and regulations. The SCT will meet monthly to discuss status, plans and progress as it relates to assisting each of the small sites with their sustainability initiatives. The SCT will present information to both Site Management and the EMCBC Director on a regular basis.

The SCT will be establishing a multi-step process which will include steps to capture existing sites sustainability initiatives as defined in their SSP and CEDR documentation, newly planned initiatives the sites may be considering, existing sustainability tools sites are currently using, sustainability lessons learned documentation for the various sites and perform interviews with site sustainability SMEs. In addition to this initial data capturing step the EMCBC Sustainability Lead will initiate the start of the SCT and monthly SCT meetings. An initial goal will be to establish the EMCBC and Small Sites

Sustainability Assistance Plan which will be a living document and establish a web based platform for which this document will reside and sustainability information will be available to assist all the small sites. In addition, specific projects will be identified and screened for the potential for focused sustainability opportunity assessments to be performed. The following are the nine sustainability focus areas which will be evaluated:

1. Energy Efficiency and Green House Gas Reduction
2. Renewable Energy
3. Water Conservation
4. Sustainable Acquisition
5. Waste Minimization/Pollution Prevention
6. Sustainable Buildings
7. Vehicles and Fuel Use
8. Electronic Stewardship
9. Land Stewardship

The SAP is being developed and will contain strategies and activities that will lead to continual Greenhouse Gas (GHG), energy, water, and transportation fuels efficiency to move the EMCBC and Small Sites toward meeting the goals and requirements of the SSPP, EOs 13514 and 13423, and DOE Orders 430.2B and 450.1A before the end of FY 2020. The Plan will also provide the path for how the EMCBC and Small Sites will summarize energy and fuel use reporting requirements and references criteria for performing sustainable design. Energy and transportation fuels management requirements will be managed and ensured to be integrated into each of the EMCBC and Small Sites contractor's Integrated Safety Management Systems (ISMS) and Environmental Management Systems (EMS).

This SAP will compliment and assist in the development of the individual Small Sites SSPs. As stated the will be a living document supported by a web based home of the EMCBC and Small Sites sustainability information. Updates to the SAP are anticipated annually with added specificity as projects are developed and requirements change.

## 1.0 Introduction

This plan is a “living document” and has been prepared as a coordinated effort by the U.S. Department of Energy (DOE) Environmental Management Consolidated Business Center (EMCBC) and its associated Small Sites (SS). The purpose of this plan being a “living document” is to initiate an ongoing continued process for the development of sustainability opportunities and integrate these initiatives into the EMCBC/SS work activities, products and services. The use of a Sustainability Core Team (SCT) and individual Sustainability Focus Areas (SFA) will lay the foundation for a systematic process for improving the environmental impacts associated with the EMCBC/SS work activities. The SFAs enable the EMCBC/SS to continue to evaluate opportunities to implement sustainable environmental stewardship practices that enhance the quality of the air, water, land, and other natural resources affected by operations. Working through this team initiative will support continuous improvement, share lessons learned, and provide greater opportunities to improve in the deployment of consistent sustainable environmental practices at all the EMCBC/SS.

## 2.0 Purpose of Sustainability Assistance Plan (SAP)

This plan establishes the use of both an EMCBC and Small Sites Sustainability Core Team (SCT) and Sustainability Focus Areas (SFA). The SCT activities adhere to the core Plan-Do-Check-Act principles as defined in any EMS program by emphasizing the necessity of integrating environmental sustainability and stewardship into the planning phases of work. The SCT activities align with the EM mission in that each SFA are periodically subject to evaluation and will use the opportunity assessments as a vehicle for continual improvement.

This plan will provide guidance and direction on opportunities to mitigate environmental impacts and establishes a focused area approach that will be used to meet, lead, and exceed in sustainability through energy efficiency, use of environmentally friendly products, conservation of natural resources, and source reduction and waste minimization of hazardous and toxic materials.

## 3.0 Scope

This plan applies to any work conducted in support of the EMCBC and EM Small Site mission related activities.

The SCT will conduct their activities and perform opportunity assessments in accordance with DOE Order 436.1, *Departmental Sustainability*; DOE Order 430.1B, *Real Property Asset Management*; EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*; EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*; EISA and EPOA.

This plan consists of nine environmental sustainability focus areas and the use of the SCT is assisting and supporting the preparation of focus area opportunity assessments. Section 7 of this plan outlines the scope of each of the sustainability focus areas and establishes a place holder for future preparation of the Small Sites specific sustainability focused area opportunity assessments. Section 7 of this plan will be updated

as new initiatives are identified with the intent of having each of the SFAs continue to be enhanced as part of the ongoing opportunity assessments that will be conducted on an annual or requested basis.

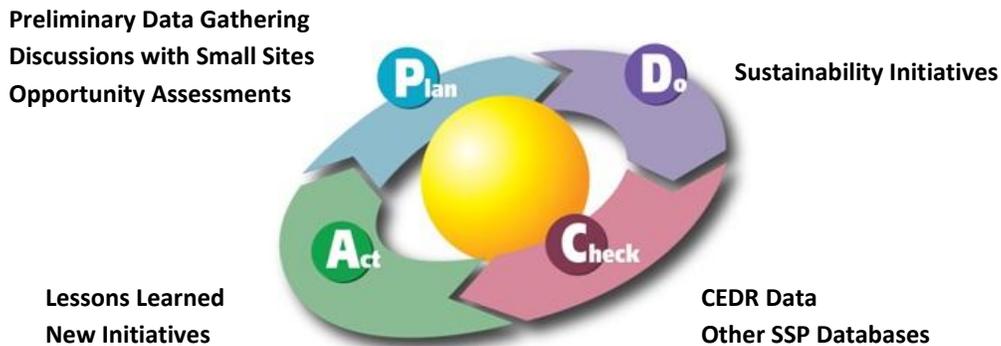
## 4.0 Schedule

Action	Due	Responsible
Draft Sustainability Assistance Plan	3/30/12	AD OTSAM
Form Core Team	4/30/12	EMCBC Director
Conduct monthly meeting	monthly	Core Team
Identify actions to reduce EM building/facility energy use	9/30/12	Core Team
Publish Individual Site Sustainability Plans	12/8/12	Site POC

## 5.0 Sustainability Core Team

The Sustainability Core Team will be comprised of sustainability Subject Matter Experts (SMEs) from both the EMCBC and Small Sites. The SCT will use a representative from the EMCBC to be the SCT lead facilitator. The SCT will meet on a monthly basis and will be coordinated by the SCT lead facilitator.

The SCT will follow a multi-step process for sustainability optimization. The multi-step process will include a first step which will primarily be a data gathering step. Each small site will provide their current Site Sustainability Plan and CEDR documentation to the SCT lead facilitator. The SCT Lead will compile the individual site data and initiate a call with each of the Small Sites sustainability representatives to discuss possible additional sustainability opportunities. The second step in the multi-step process will be having the SCT review the nine sustainability focus areas and develop individual lines of inquiry for specific sustainability opportunity assessments. The lines of inquiry for each of the nine sustainability opportunity assessments will be regularly revisited and updated as new information and lessons learned is gathered. The SCT will support being the clearing house of information, will capture lessons learned, develop lists of what works and doesn't work, define sustainability "low hanging fruit", define process for life cycle cost comparisons, initiate early planning as part of baseline development among some of the way they will assist the various small site in optimizing sustainability initiatives.



## Sustainability Core Team Process

### 6.0 Sustainability Opportunity Assessments

The concept of sustainability opportunity assessments (SOAs) was derived from the proven process used by other DOE sites and the EPA for pollution prevention and waste minimization practices. Opportunity assessments can be a valuable tool when looking for ways to improve the efficiency of production operations and decrease operating expenses. Opportunity assessments can help identify ways to reduce operating expenses, use fewer raw materials, conserve energy, reduce wastes and emissions, meet and reduce regulatory requirements, improve employee safety and support a positive image for the DOE.

### 7.0 Sustainability Focus Areas

In an effort to assist the Small Sites in their sustainability initiatives the SCT will work closely with the Small Sites Sustainability POCs. Individual on-site opportunity assessments will be offered in any of the following nine sustainability focus areas:

1. Energy Efficiency and Green House Gas
2. Renewable Energy
3. Water Conservation
4. Sustainable Acquisition
5. Sustainable Buildings
6. Vehicles and Fuel Use
7. Electronics Stewardship
8. Waste Minimization/Pollution Prevention
9. Land Stewardship



## 6.1 Focus Area 1: Energy Efficiency and Green House Gases

### **Purpose**

The purpose of the Energy Efficiency and Greenhouse Gas (E2G2) focus area is to strive to maximizing efficiency in the total energy consumed and decrease the green house gases at each of the EMCBC/SS. The E2G2 focus area will establish a systematic approach of using the SCT and E2G2 Opportunity Assessments for improving efficiency and decreasing greenhouse gas generation, when applicable. The purpose is to ensure compliance with Executive Order 13423, EO 13514 and DOE Order 436.1.

### **Scope**

The E2G2 scope strives for improving energy efficiency at the EMCBC/SS and reducing greenhouse gas emissions through a measurable reduction in energy intensity, when applicable. EO 13514 requires that the energy goals in 13423 remain in effect. EO 13423 requires a reduction of energy intensity and greenhouse gases by 3% annually through the end of 2015 or 30 % by the end of FY2015. EISA 2007 also has the same requirement. EO 13514 also requires DOE to set goals for Scope 1, 2 and 3 emissions. The SCT will work with the individual Small Site sustainability POC to continue to review opportunities to reduce energy intensity and greenhouse gas generation. Individual E2G2 opportunity assessments will be conducted when requested. The SCT will work with the Small Sites to evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility.



## 6.2 Focus Area 2: Renewable Energy

### Purpose

The EMCBC/SS Renewable Energy Focus Area (REFA) serves to monitor and maximize the amount of renewable energy produced to reduce purchased energy in support of the EMCBC/SS mission. The purpose of the (REFA) is to implement DOE 436.1, the renewable energy elements of EO 13423 and EO 13524, and EPO 2005.

### Scope

EO 13423 stated goals for renewable energy for new renewable energy resource consumption initiatives and to extent feasible deployment of on-site renewable energy projects. The Renewable Energy Focus Area will use the SCT to perform site specific renewable energy opportunity assessments to identify possible site deployable renewable energy projects. The SCT will also work closely with the Small Sites to capture and catalogue any opportunities where the utility providers are using renewable energy sources and the site can take credit. The SCT will work with the Small Sites to continue to pursue on-site projects where feasible. The opportunity assessments will include the cost of installing possible renewable energy projects and the value of the energy produced. This will allow for return-on-investment calculations to be performed. The SCT will work with the Small Sites to evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility.



## 6.3 Focus Area 3: Water Conservation

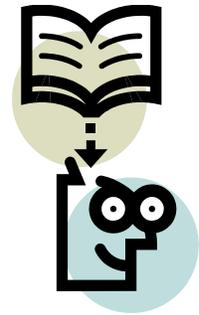
### Purpose

The EMCBC/SS Water Conservation Focus Area (WCFA) promotes the conservation of water resources through efficiency and reuse management at all the EMCBC/SS. The purpose of this focused area is to establish a general approach for managing potable water and non-potable fresh water conservation at all the EMCBC/SS that ensures compliance with EO 13423, EO 13514, DOE 436.1, EPAct 2005 and EISA 2007.

### Scope

The WCFA will use the SCT to provide guidance on the management of water use, loss, waste, and reuse at applicable EMCBC/SS. The SCT will perform WCFA Opportunity assessments when applicable that will capture water use intensity, tracking and measuring industrial and landscaping non-potable water consumption, identifying and prioritizing water efficiency improvement opportunities, assist in reporting and training of new approaches , when applicable.

EO 13423 and EO 13514 mandates that all federal agencies reduce the intensity of potable water consumption by a minimum of 2% annually through the end of FY 2020. The SCT will work closely with the Sites Sustainability POC to evaluate opportunities for water conservation initiatives. The preferential purchase of water-efficient products and services, new construction water use efficiency measures, Leadership in Energy and Environmental Design (LEED) certification for leased facilities are all areas of opportunities that where applicable will be investigated by the SCT. The SCT will work with the Small Sites to evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility.



## 6.4 Focus Area 4: Sustainable Acquisition

### Purpose

The Sustainable Acquisition Focus Area (SAFA) is based on the fundamentals of educating the work force and EMCBC/SS contracting officers on leveraging acquisitions to foster markets for sustainable technologies, materials, products and services when conducting EMCBC/SS mission activities. The SAFA will use the assistance of the SCT to implement a process to manage and continually improve the opportunities for the EMCBC/SS to purchase sustainable goods and services. The SCT will also work towards increases worker awareness about the SAFA.

### Scope

The SAFA scope is to advance sustainable acquisition and strive towards the long term goal of maximizing sustainable products and services in all new contracts. The SCT will work with the EMCBC/SS pursuing opportunities for products and services to be Energy Star or FEMP designated, water efficient, biobased, environmentally preferable, non-ozone-depleting, contain recycled content, or are nontoxic or less-toxic alternatives. The SCT will perform SAFA Opportunity Assessments and evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility.



## 6.5 Focus Area 5: Sustainable Buildings

### **Purpose**

The Sustainable Buildings Focus Area (SBFA) promotes the conservation of natural resources, energy efficiency, waste minimization, and the creation of healthy, productive work environments as a part of cost-effective construction and improvements on new and existing EMCBC/SS owned and leased facilities. The SBFA in conjunction with the SCT will work on the development of processes and opportunities to ensure that building designs reduce negative impacts, reduce energy and water use, use recycled-content materials, and improve the health and comfort of building occupants in accordance with the sustainable building requirements in EO 13423, EO 13514, DOE Order 436.1 and the DOE SSPP.

### **Scope**

The EO 13423 goals for sustainable buildings (also known as “green” buildings) are to ensure that any new construction and major renovation of EMCBC/SS buildings complies with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings 9 (also known as Green Principles) and 15 percent of federal capital asset building inventory of DOE by end of 2015 incorporates sustainable practices provided by Green Principles. EO 13514 expands upon 13423 and has a goal to implement HPSBD attempting to achieve zero net energy, new construction complies with Green Principles, 15% of existing buildings greater than 5000 square feet meet Greening Principles, pursue cool roofs and vegetative roofs, and manage existing buildings to reduce energy consumption. The SCT will work closely with the EMCBC/SS to take every opportunity to support LEED certifications, HPSB design and other Green Buildings initiatives via SBFA Opportunity Assessments. The SCT will perform SBFA Opportunity Assessments and evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility.



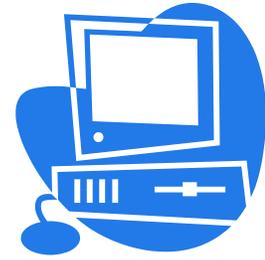
## 6.6 Focus Area 6: Vehicles and Fuel Use

### Purpose

The Vehicle and Fuel Use Focus Area (VFUFA) is established to conserve finite natural resources by reducing the use of petroleum fuel, increasing the use of alternative fuel, and using alternative-fuel and hybrid vehicles when applicable and available. In addition to promoting fuel conservation and the use of renewable resources, the VFUFA working with the SCT will be promoting the opportunities for the EMCBC/SS to incorporate the requirements of alternative fuel vehicles and biofuel usage as defined in EO 13514, EO 13423, DOE Order 436.1, EISA 2007 and EPAAct 2005.

### Scope

The SCT will work with the EMCBC/SS POC to look at opportunities for increasing the leasing of alternative-fuel vehicles, reducing the total consumption of petroleum products in fleet vehicles by 2% annually, and increasing the consumption of alternative fuels by 10 percent annually. In addition, promote the use of low-greenhouse-gas-emitting vehicles, optimize the number of fleet vehicles and continue to perform VFUFA opportunity assessments identifying additional green initiatives. The SCT recognizes various factors will exist at the EMCBC/SS due to mission critical factors requiring larger numbers of vehicles necessary to complete work. However, the SCT will work with the EMCBC/SS to evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility.



## 6.7 Focus Area 7: Electronics Stewardship

### **Purpose**

The purpose of the Electronics Stewardship Focus Area (ESFA) is to foster the use of beneficial environmental practices with respect to the entire life cycle of electronic equipment used to support the EMCBC/SS. The SCT working with the EMCBC/SS will provide for a systematic process for considering positive environmental attributes (such as energy efficiency, lower-toxicity materials, maximum product life, and waste minimization) during electronic equipments life cycle. The SCT will integrate these concepts into their ESFA opportunity assessments. The successful execution of these type of initiatives allow for the EMCBC/SS to implement the electronic stewardship goals as identified in EO 13423, EO 13514, DOE Order 436.1 and the DOE SSPP.

### **Scope**

The ESFA with the assistance of the SCT will perform opportunity assessments following three phases of electronic equipment life cycle which is purchase, use and disposition. Electronic stewardship opportunities in the form of ESFA Opportunity Assessments will include review of electronic equipment purchasing of energy efficient and environmentally friendly product construction, review of operating and maintenance practices in a manner to maximize energy efficiency and promoting extended life expectancy and reuse or recycle initiatives for electronic equipment among some of the initiatives. The SCT will work with the EMCBC/SS to evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility

## 6.8 Focus Area 8: Waste Min/Pollution Prevention



### Purpose

The purpose of the Waste Minimization/Pollution Prevention Focus Area (WM/P2) is to promote a more sustainable workplace and environment at the EMCBC/SS through waste minimization and pollution prevention practices. The SCT will address the recycling and pollution elements of EO 13514, EO 13423 and DOE Order 436.1. The SCT will perform WM/P2 Opportunity assessments focusing on decreasing the purchasing of hazardous chemicals, establishing mechanisms and educating managers on recycling, restricted reuse and reuse and performing all these assessments early on in the planning phases of the projects to ensure success.

### Scope

The SCT will perform WM/P2 Opportunity assessments within the following scope; (1) recycling initiatives of non-hazardous materials such as cardboard, steel, glass, aluminum, paper etc. (2) reducing hazardous waste inventory through green product procurement, (3) calculation of greenhouse Scope 3 data for input in CEDR annual reports, divert C&D landfill material, diversion of compostable and organics from landfills, develop pest management programs that are green and various other WM/P2 opportunity assessments. The SCT will work with the EMCBC/SS to evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility.



## 6.9 Focus Area 9: Land Stewardship

### **Purpose**

The Land Stewardship Focus Area (LSFA) advocates improving ecosystem health at EMCBC/SS in accordance with DOE Order 436.1, federal regulations such as Endangered Species Act, Federal Noxious Weed Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, Historic Preservation Act, Coastal Zone Management Act and others. The SCT will work with the EMCBC/SS POC to consider these requirements as part of any sustainability environmental practice/proposal.

### **Scope**

As EMCBC/SS are performing their mission activities opportunities will be presented as it relates to land stewardship practices. The SCT will work with the Site POC on LSFA opportunities that will allow for natural resource management activities to be balanced with possible sustainability practices. An example would be site reclamation activities where grading a site for positive drainage and constructing channels to protect disposal cell integrity consider the former ecosystem. The SCT will assist in performing LSFA Opportunity assessments which can factor in adaptive management practices, enhancement of vegetation and wildlife, reduction in invasive activities, wildlife enhancement and other natural resource sustainable practices. The SCT will work with the EMCBC/SS to evaluate initiatives and promote implementation of projects based on cost effectiveness and feasibility