



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



FEMP Sustainability Program Guiding Principles Overview ISWG Meeting

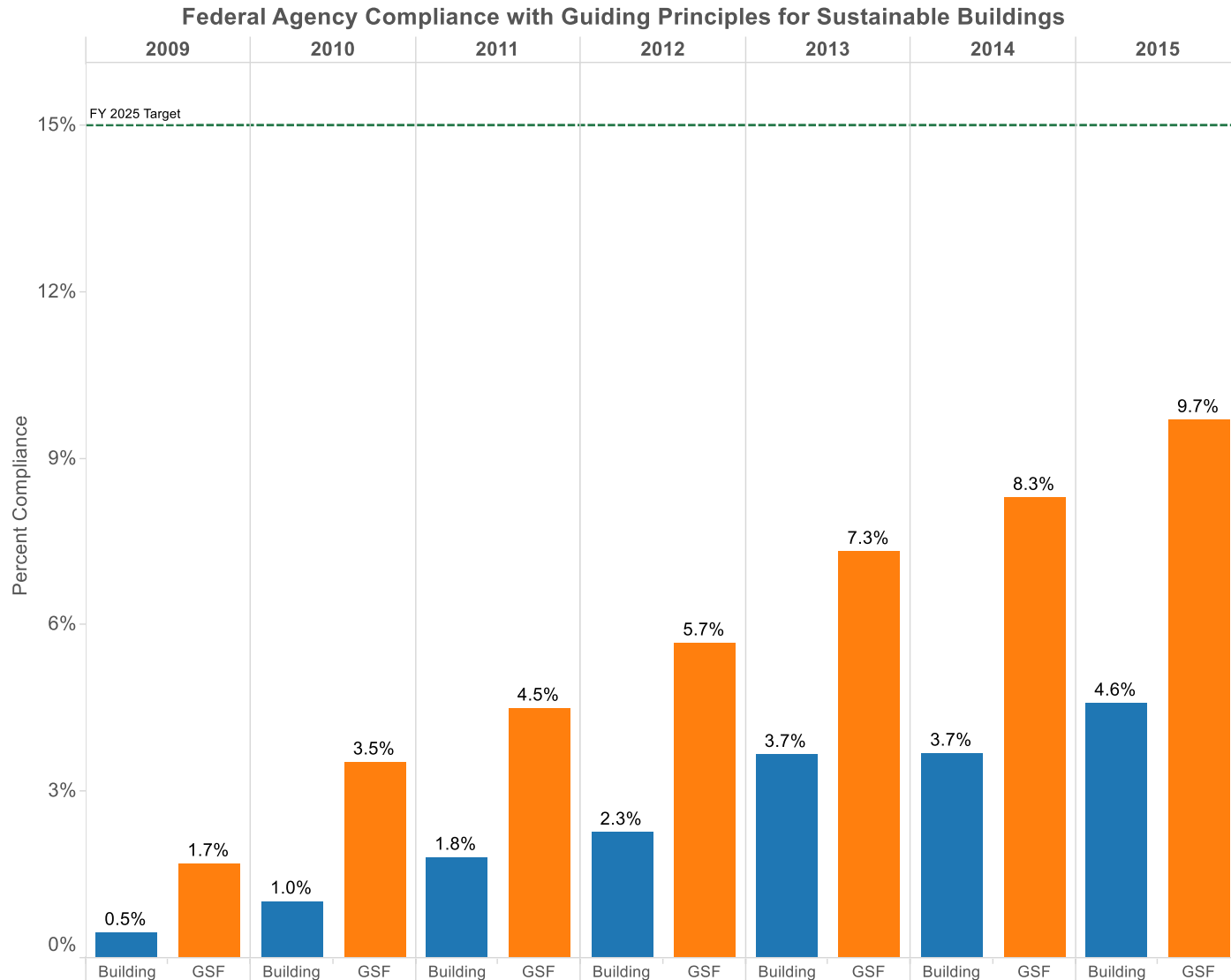
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Guiding Principles for Sustainable Federal Buildings Compliance



FY16/FY17 FEMP Sustainability Program

NEW FEMP Guiding Principles Resources and Tools	Scheduled Release
2016 Guiding Principles Crosswalk (PDF) <i>- Crosswalk of significant updates and changes from 2008 GPs.</i>	May 2016
2016 Guiding Principles Supplement Checklist (EXL) <i>- Supplemental to the EnergyStar Portfolio Manager Checklist, this 2016 GP Checklist allows Agencies to document progress of compliance and identifies recommended methods of documenting compliance.</i>	June 2016
FEMP On-Demand eTraining (Online) <i>- Five (5) updated eTraining core course covering the background, definitions, and preparations needed to document and implement actions to ensure compliance with the 2016 Guiding Principles for Federal Buildings. IACET Accredited</i>	July/August 2016
Energy Exchange 2016 (In-Person) <i>- Two (2) 2016 Guiding Principles specific sessions will be held at Energy Exchange 2016</i> 1) <i>Pre-conference GP workshop (Mon, Aug 8th – 12pm-5pm)</i> 2) <i>Track 7, Session 1: Guiding Principles 2016 (Tue, Aug 9th – 10:30am-12:00pm)</i>	August 2016
FEMP Website redesign (Online) <i>- Redesign of FEMP Sustainability website section to include a specific section on building sustainability and one on campus sustainability.</i>	FY17
FEMP Regional Training Workshops (In-person) <i>- FEMP will host a series of regional training workshops focused on 2016 Guiding Principles training and implementation, sustainable campus solutions and net-zero (energy, water, waste) strategies. Workshops will be hosted at regional GSA or local Federal facilities, open/free to all Feds and will be located strategically across the country.</i>	FY17/FY18

Agenda

- **What are the 2016 Guiding Principles?**
- **Why do we have to meet them?**
- **Which buildings should be considered?**
- **How much time do we have to meet them?**
- **How do we demonstrate compliance?**
- **How do we track compliance?**

Guiding Principles for Sustainable Federal Buildings

- I. Employ integrated assessment, operation, and management principles
- II. Optimize energy performance
- III. Protect and conserve water
- IV. Enhance indoor environmental quality
- V. Reduce environmental impact of materials
- VI. Assess and consider climate change risks – **NEW**

Multiple Metrics, elements and sub-elements



The Federal Government is the nation's single largest landlord and energy consumer, operating nearly 300,000 facilities comprising more than 3.2 billion square feet.



Key Documents

Executive Order:

E.O. 13693, *Planning for Federal Sustainability in the Next Decade*; March 2015
Implementing Instructions for Executive Order 13693; June 2015

Council on Environmental Quality (CEQ):

Determining Compliance with the Guiding Principles for Sustainable Federal Buildings; February 2016

Guiding Principles for Sustainable Federal Buildings and Associated Instructions; February 2016

High Performance and Sustainable Buildings Guidance; December 2008
(effective through September 2017)

Executive Order 13693

E.O. 13693, *Planning for Federal Sustainability in the Next Decade*, reaffirmed Federal green building efforts and called for **revised Guiding Principles to:**

- Reflect progress in green building design, construction, and operation practices;
- Broaden considerations around protecting occupant health, wellness, and productivity;
- Address climate change risks.



Executive Order 13693

E.O. 13693 section 3(h)(ii) states that agencies will identify “...a percentage of **at least 15 percent, by number or total square footage,**” of their “existing buildings **above 5,000 gross square feet (GSF)** that will, **by fiscal year 2025,** comply with the revised Guiding Principles for Federal Leadership in...Sustainable Buildings (Guiding Principles)...and making annual progress toward 100 percent conformance with the Guiding Principles for its building inventory.”

New Construction and Modernization is included in the “EO Implementing Instructions”



Applicability

- **At least 15% of Federal OWNED Buildings over 5,000 gross square feet no later than FY 2025 either by:**
 - Building or
 - Square footage
- **Per EO 13693 implementing instructions need to declare which path**
 - An Agency should not change metrics for this goal over time
 - Any change in metric is subject to CEQ review, in consultation with OMB



Applicability

The 2016 Guiding Principles **do not apply** to buildings, where:

- A Report of Excess (ROE) has been submitted to GSA
- A Determination of Disposal (DOD) has been made
- The building has been classified as Surplus
- The building is leased
- The building falls within FRPP de minimis thresholds
 - Unoccupied: The building is occupied 1 hour or less per person per day on average; **AND**
 - Low/ No Energy Use: The total building energy consumption from all sources is less than 20.9 BTU/ SF/ Yr; **AND**
 - Low/ No Water Use: Annual average water consumption is less than 2 gallons per day for the building.
- The building is 5,000 GSF and less

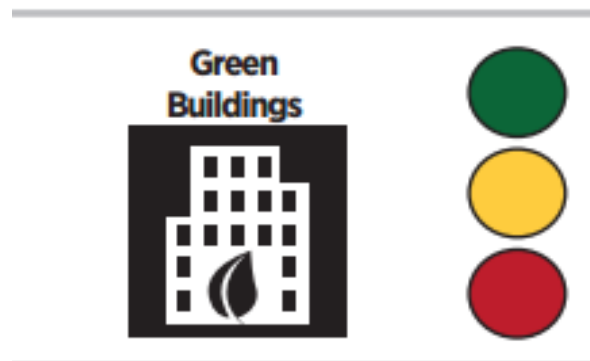
This will impact your baseline number of buildings and your percentage # of buildings or GSF

Applicability

All buildings that were documented as meeting the Guiding Principles through FY 2015 count towards the 2025 goal of 15% including previous leases.

Existing buildings that made significant progress (over 50%) to comply with the 2008 Guiding Principles may continue to use the 2008 GP if compliance is achieved by **Sept 30th 2017**.

New Buildings shall use the 2016 Guiding Principles if project design is not completed prior to February 2016.



Applicability

Each agency is responsible to:

- Identify their 15% of applicable buildings
- Evaluate its buildings for compliance with the Guiding Principles
- Ensure that sufficient evidence and documentation is readily available to demonstrate compliance



If there is any conflict between the revised Guiding Principles, and a statute, regulation, or executive order - the statute, regulation or executive order governs.

Compliance - Key Points

The CEQ “Determining Compliance” document takes precedent

There are “required” and “optional” Guiding Principles

Non-Applicability may be used for selected Guiding Principles

Campus – Wide documentation may be used

Third party certifications may be used but **all** GP elements must be met

FEMP and CEQ are working on compliance interpretation



2016 Guiding Principles

New Construction and Modernization

I. Employ Integrated Design Principles

- 1. Integrated Design (Required)
- 2. Commissioning (Required)

II. Optimize Energy Performance

- 3. Energy Efficiency (Required)
- 4. Renewable and Clean Energy (Required)
- 5. Metering (Required)
- 6. Benchmarking (Required)

III. Protect and Conserve Water

- 7. Indoor Water Use (Required)
- 8. Outdoor Water Use (Required)
- 9. Alternative Water (Required)
- 10. Stormwater Management (Required)

IV. Enhance Indoor Environmental Quality

- 11. Ventilation and Thermal Comfort (Required)
- 12. Daylighting and Lighting Controls (Required)
- 13. Indoor Air Quality (Required)
- 14. Occupant Health and Wellness (Required)

V. Reduce the Environmental Impact of Materials

- 15. Material Content and Performance (Required)
- 16. Waste Diversion (Required)
- 17. Materials Management (Required)

VI. Assess and Consider Climate Change and Risks

- 18. Mission Criticality (Required)
- 19. Floodplain Considerations (Required*)
- 20. Facility Design (Required**)
- 21. Facility Adaptation (Required**)

*For new construction, GP metrics #1-20 are required.

**For Modernization, GPs metrics #1-18 and #21 are required.

Existing Buildings

I. Employ Integrated Design Principles

- 1. Integrated Design (Required)
- 2. Commissioning (Required)

II. Optimize Energy Performance

- 3. Energy Efficiency (Required)
- 4. Renewable and Clean Energy (Optional*)
- 5. Metering (Optional*)
- 6. Benchmarking (Optional*)

III. Protect and Conserve Water

- 7. Indoor Water Use (Required)
- 8. Outdoor Water Use (Optional*)
- 9. Alternative Water (Optional*)
- 10. Stormwater Management (Optional*)

IV. Enhance Indoor Environmental Quality

- 11. Ventilation and Thermal Comfort (Required)
- 12. Daylighting and Lighting Controls (Optional*)
- 13. Indoor Air Quality (Optional*)
- 14. Occupant Health and Wellness (Optional*)

V. Reduce the Environmental Impact of Materials

- 15. Material Content and Performance (Required)
- 16. Waste Diversion (Required)
- 17. Materials Management (Optional*)

VI. Assess and Consider Climate Change and Risks

- 18. Climate Resilience and Adaption (Optional*)

* Twelve out of 18 metrics are required—eight that are specified as required plus four additional.

Compliance – New Construction and Modernization

Which 2016 Guiding Principles to Use: Existing Buildings or New Construction and Modernization?

Follow New Construction and Modernization *only* when:

The agency is essentially conducting a comprehensive replacement or restoration of **virtually all** major systems, interior work (such as ceilings, partitions, doors, floor finishes, etc.), and building elements and features.



Compliance – New Construction and Modernization



Minimum Requirements – New Construction

1. Achieve 20 out of 21 metrics for full compliance



Minimum Requirements – Modernization

1. Meet 19 of 21 metrics for full compliance

Note: Some metrics may have requirements based on existing Statutes and Executive Orders

Compliance – Existing Buildings



Minimum Requirements

Achieve 12 out of 18 metrics for full compliance

- 8 of the 18 metrics “are required” - must complete, not an option.
- 4 optional metrics

Note: Some metrics may have requirements based on existing Statutes and Executive Orders



The Required “8” - Existing Buildings

- I. Employ Integrated Assessment, Operation, and Management Principles**
 - 1. Integrated Assessment, Operation, and Management
 - 2. Commissioning
- II. Optimize Energy Performance**
 - 3. Energy Efficiency
- III. Protect and Conserve Water**
 - 7. Indoor Water Use
- IV. Enhance Indoor Environmental**
 - 11. Ventilation and Thermal Comfort
- V. Reduce the Environmental Impact of Materials**
 - 15. Material Content and Performance
 - 16. Waste Diversion
- VI. Assess and Consider Climate Change Risks**
 - 18. Climate Resilience and Adaptation



Optional Metrics – Existing Buildings

Must meet at least 4:

II. Optimize Energy Performance

- 4. Renewable and Clean Energy
- 5. Metering
- 6. Benchmarking

III. Protect and Conserve Water

- 8. Outdoor Water Use
- 9. Alternative Water
- 10. Stormwater Management

IV. Enhance Indoor Environmental

- 12. Daylighting and Lighting Controls
- 13. Indoor Air Quality
- 14. Occupant Health and Wellness

V. Reduce the Environmental Impact of Materials

- 17. Materials Management



Compliance

Not Applicable

For building evaluation purposes, “**not applicable**” may be used where the building’s inherent function, mission, safety, or designation prevents compliance with a specific guiding principle, element, or sub-element.



Compliance

Not Applicable

- The use of “not applicable” should be minimized.
- For existing buildings, criteria that an agency determines to be “not applicable” **do not count toward the total number of required metrics** for an individual building.
- For New Construction and Modernization “not applicable” is equivalent to compliance with a specific guiding principle, element or sub-element
- Agencies should document all determinations of non-applicability.



Reporting Compliance

How do agencies track, document and report progress?



- Sustainable Buildings Checklist in Portfolio Manager
 - Currently reflects 2008 GPs
 - May use 2008 GPs through Sept 2017
 - 2016 GP updates in progress
- FEMP Checklist (.xls)
- Agency-developed checklist

Sustainable Buildings Checklist in PM

Sustainable Buildings Checklist: Heinlein Office Bldg

The Sustainable Buildings Checklist evaluates sustainability in existing buildings. It was first developed for US federal building managers for compliance with the 2008 [Federal Guiding Principles for High Performance Sustainable Buildings](#). It is also a valuable tool for evaluating the sustainability of non-government buildings. The Checklist will be updated to reflect the new [2016 Guiding Principles](#).

About this Property
Property Name: [Heinlein Office Bldg](#) [View Details & IDs](#)

About this Checklist (Last Updated: 04/29/2016)

Estimated Date of **Sustainable Buildings Checklist** Compliance:

Actual Date of **Sustainable Buildings Checklist** Compliance:

Third Party Certification: None [Select a Third Party](#)

Checklist Manager: [Add Contact](#)

Compliance Documents: 0 files [Upload and View Documents on File](#)

[Add Note to this Checklist](#)

Checklist Complete: 12%

Category	Percentage
Yes	8%
Not Applicable	4%
No	0%
In Process	0%
Not Assessed	88%

Checklist completion percentage includes "Yes" and "Not Applicable" responses.

Generate & Download A Printable Checklist

This Printable Checklist can be used to show all of your responses to date or to prepare your responses in advance.

[Download & Print PDF](#)

- Conduct building assessments
- Track, view and report progress
- Store compliance documents
- Review up-to-date energy and water metrics generated by Portfolio Manager
- Create a report showing compliance for entire building inventories
- Report compliance in the Federal Real Property Profile (FRPP)

<https://portfoliomanager.energystar.gov/pm/login.html>

2016 FEMP Guiding Principles Checklist

Metric totals update as responses of “Yes” are selected

2016 Federal High Performance and Sustainable Building Guiding Principles DRAFT Checklist for Sustainable Existing Buildings DRAFT									
Agency:		Department/Region:			Federal Campus:				
Building Name:		Checklist Manager:							
Date of Compliance:		Date of Reconciliation:			Federal Real Property ID:				
Instructions: Meet 12 of 18 metrics to comply with the Guiding Principles for Existing Buildings—eight are specified as required plus choose four additional. Metrics marked as “Not Applicable” do not count towards compliance.									
Total Metrics Met 0 of 18		Required Metrics 0 of 8		Responses					
		Additional Metrics 0 of 10		0	0	0	0	0	
Guiding Principle	Required or Additional	Metric	Suggested Evidence of Compliance (may need one or more)	Yes	In Process	No	Not Assessed	N/A	Notes/Comments
I. Employ Integrated Assessment, Operation, and Management Principles									
Assessment, Operation, and Management	RQD	1. Through an integrated process and team, assess building and operating conditions and identify areas for improvement; establish operational goals for environmental performance; and incorporate goals into building management. [Required]	<input type="checkbox"/> Team Poster or equivalent						
			<input type="checkbox"/> Baseline Guiding Principles assessment						
			<input type="checkbox"/> Building assessment (condition assessment, EISA audit, etc.)						
			<input type="checkbox"/> Site or agency-level policy for environmental performance						
			<input type="checkbox"/> Document incorporation of goals into building management	○	○	○	○		
			<input type="checkbox"/> Environmental Management System (EMS)						
			<input type="checkbox"/> Site sustainability plan						

- An alternative to Portfolio Manager
- Use for building walkthroughs and tracking
- Updated to reflect new “points” system

FEMP Training Calendar

Project Assistance

Training

Calendar

eTraining Courses

First Thursday Seminars

Outreach

Training

FEMP trains Federal agency managers about the latest energy requirements, best practices, and technologies through [eTraining Courses](#), [First Thursday Seminars](#), and webinars.

Customize your display by choosing a category and format below, or click a link in the navigation at left.

1. Select Training Category (What's this?)

- All categories
- Design, operations, and maintenance
- Energy efficient products
- Energy management
- Financing
- Fleet
- Greenhouse gases
- Institutional change
- Laws, regulation, and guidance
- Renewable energy
- Water efficiency

2. Select Training Format

- All formats
- Live training - register to attend
- On demand training - watch any time



<https://www4.eere.energy.gov/femp/training/>

FEMP Sustainability Team

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