

COG's Climate, Energy and Environment Policy Committee (18 November 2009)

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



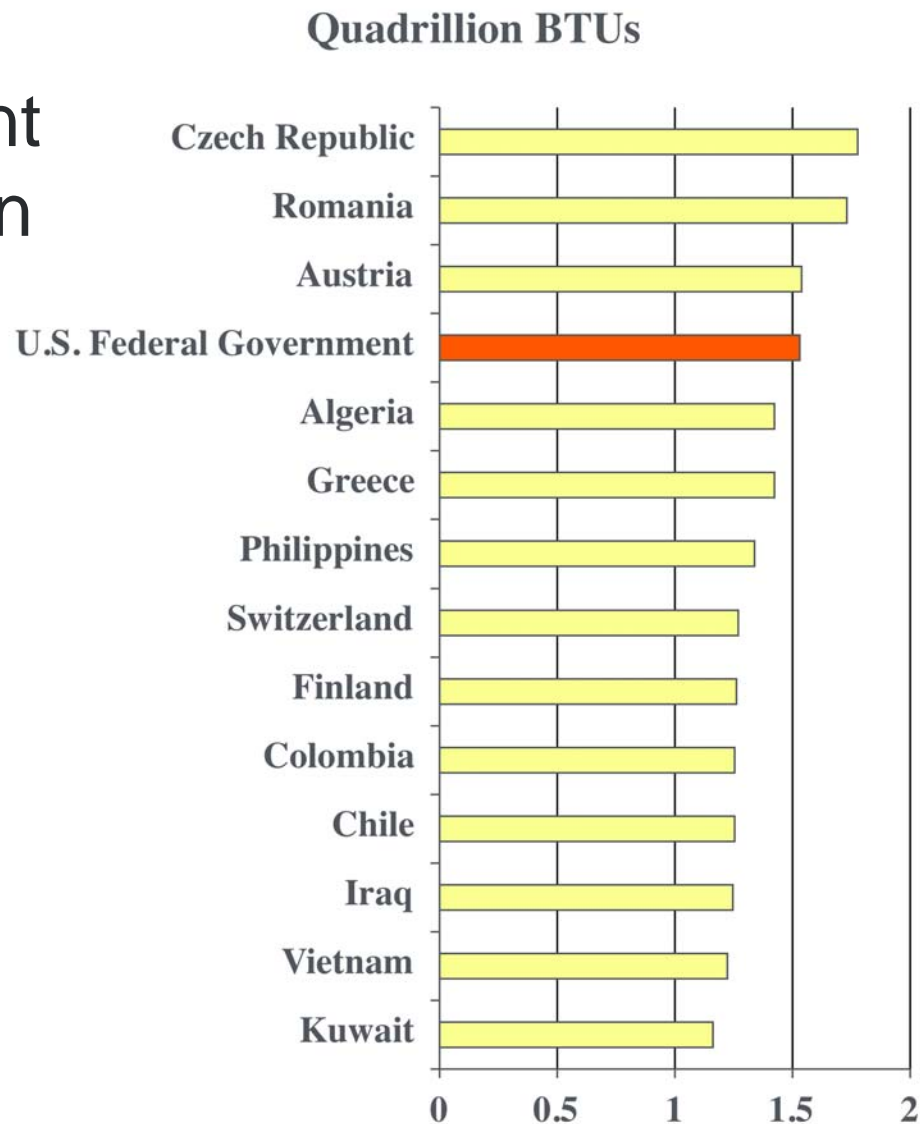
Executive Order 13514

*Federal Leadership in Environmental,
Energy, and Economic Performance*

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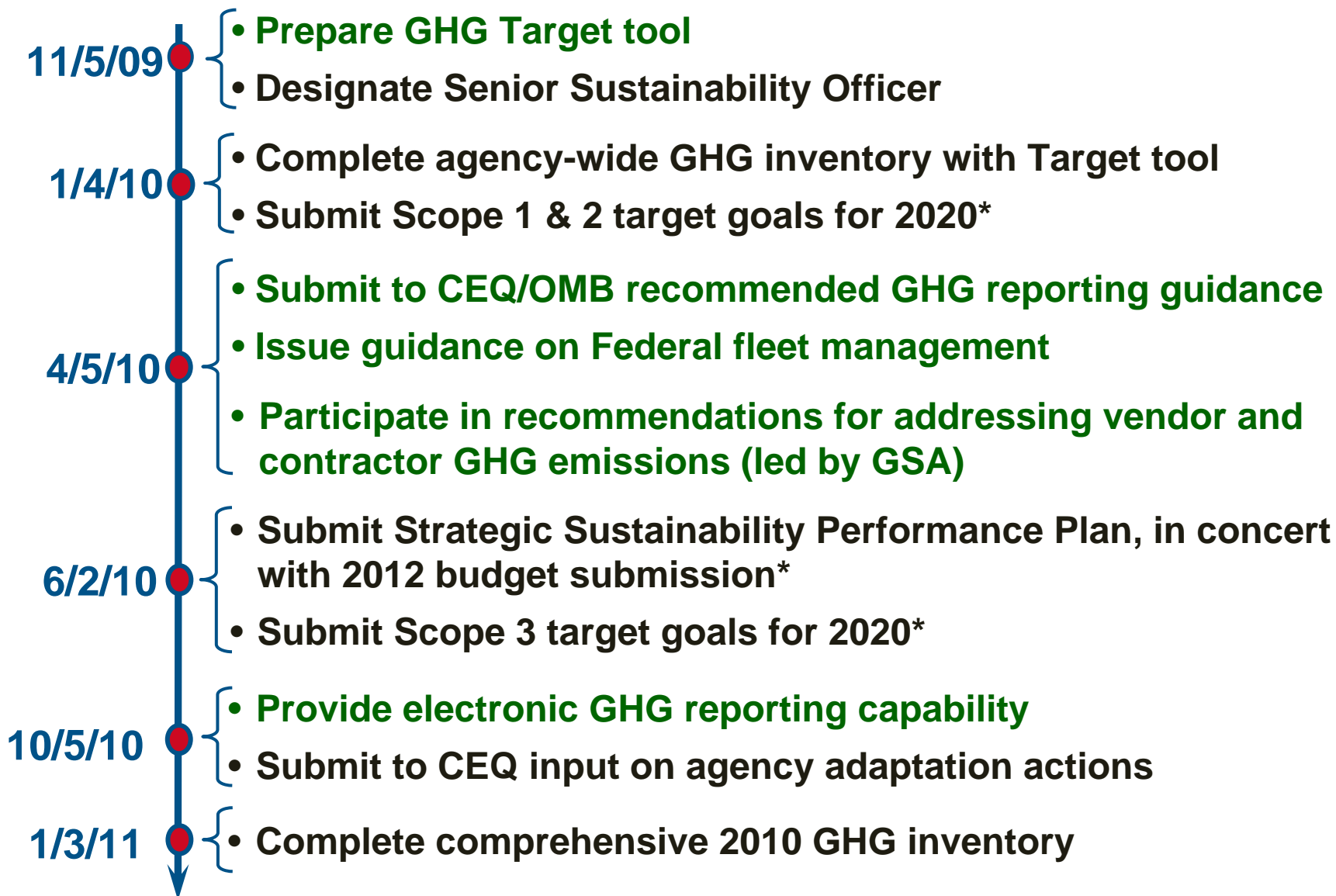
- The Federal government operates in over 3 billion square feet in about 500,000 buildings
- At least 80% of the Federal complex in 10 years will consist of buildings in the current building portfolio



On October 5, President Obama Signed Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*.

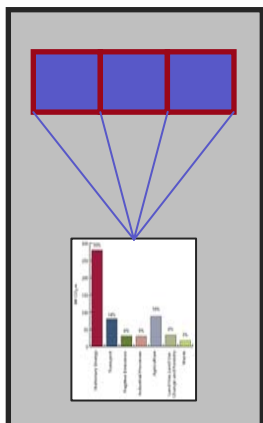


- Executive Order 13514 establishes numerous goals for Federal agencies.
- EO 13514 represents a transformative shift in the way the government operates by:
 1. establishing GHGs as the integrating metric for tracking progress in Federal sustainability
 2. collaborating with neighboring communities and reducing emissions from supply chain
 3. requiring a deliberative planning process that links to budget
- E.O. 13423 *Strengthening Federal Environmental, Energy, and Transportation Management* (January 29, 2007) is not revoked by the new E.O.; the requirements of that Order remain in effect.



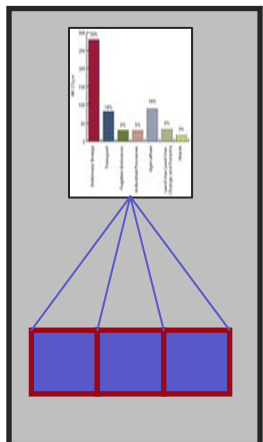
Green: FEMP-Specific Tasks Black: Agency Requirements

During the “Road Test”, agencies can use two approaches to developing GHG inventories – Top-Down or Bottom-Up.



- Top-down
 - Headquarters level
 - Use existing data systems
 - Standardized calculation

- ❖ Faster
- ❖ Cheaper
- ❖ Less Detailed
- ❖ Less Site Ownership



- Bottom-up
 - Equipment level
 - Detailed site-specific data
 - Customized calculation
 - Rollup to headquarters level

- ❖ Slower
- ❖ More Expensive
- ❖ More Detailed
- ❖ More Site Ownership

The new Executive Order also requires agencies to meet sustainability targets, including:

- Achieve 30% reduction in vehicle fleet petroleum use by 2020
- Achieve 26% reduction in potable & 20% reduction in industrial, landscaping, & agricultural water consumption by 2020
- Comply with new EPA stormwater management guidance
- Achieve 50% recycling & waste diversion by 2015
- Requires that 95% of all applicable procurement contracts will meet sustainability requirements
- Requires 15% of buildings meet the *Guiding Principles for High Performance and Sustainable Buildings* by 2015
- Design all new Federal buildings which begin the planning process by 2020 to achieve zero-net energy by 2030

By June 2, 2009, Submit the SSP Plan that shall:

- Demonstrate how agency will achieve the goals and targets in Section 2 of the E.O., including GHG reduction targets;
- Be integrated into agency's strategic planning and budget process;
- Identify current and planned activities, policies, plans, procedures and practices that are relevant to agency implementation of the EO;
- Take into consideration environmental measures as well as economic and social benefits and costs in evaluating projects and activities based on lifecycle return on investment;
- Evaluate climate change risks and vulnerabilities to managing the effects on DOE operations and missions;

Each agency shall advance regional and local integrated planning by:

- (i) participating in regional transportation planning and recognizing existing community transportation infrastructure
- (ii) aligning Federal policies to increase the effectiveness of local planning for energy choices (e.g. locally generated renewable energy)
- (iii) ensuring that planning for new Federal facilities or new leases includes consideration of sites that are pedestrian friendly, near existing employment centers, and accessible to public transit...
- (iv) identifying and analyzing impacts from energy usage and alternative energy sources in all Environmental Impact Statements and Environmental Assessments for proposals for new or expanded Federal facilities...; and
- (v) coordinating with regional programs for Federal, State, tribal, and local ecosystem, watershed, and environmental management;

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www.eere.energy.gov/femp/program/greenhousegases.html

www.fedcenter.gov/programs/greenhouse/

www.ghgprotocol.org/psp

The examples below illustrates just a few sources of GHGs from federal agencies.

GHG	Some Sources
CO ₂ (Carbon dioxide)	Fossil fuel combustion , Land Use & Land Use Change (LULUC)
CH ₄ (Methane)	Cattle, WWT, landfills, rice fields, natural gas
N ₂ O (Nitrous Oxide)	Agriculture, mobile & stationary combustion, WWT, incineration
PFCs (Perflourocarbons)	Al production, semiconductor, health imaging
HFCs (Hydroflourocarbons)	Refrigerant leaks, fire extinguishers, solvents
SF ₆ (Sulfur Hexaflouride)	Mg casting, transformers, switches
NF ₃ (Nitrogen Triflouride)	Semiconductor manufacturing