



U.S. Department of Energy
Energy Efficiency and Renewable Energy

federal energy management program

Energy Efficient Federal Procurement: Contributing to Federal Energy Goals & Transforming U.S. Markets

Joan Glickman

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EPAct 2005, Section 104: Federal Agency Requirements

- Agencies shall procure ENERGY STAR[®] qualified or FEMP designated products
- Agencies shall incorporate ENERGY STAR[®]/FEMP criteria in...
 - Guide specifications
 - Project specifications
 - Construction, renovation, and services contracts
 - Evaluation of competitive offers



EPAct 2005: Federal Supply Agencies' Requirements

- General Services Administration (GSA) & Defense Logistics Agency (DLA)
- Priority Listing: “ENERGY STAR® and FEMP designated products shall be clearly identified and prominently displayed in any inventory or listing of products ...”
- Limit Supply: “Agency shall supply **only** ENERGY STAR® or FEMP designated products...”
- Exceptions: Agency head must document in writing that...
 - Product is not life-cycle cost-effective
 - No efficient products are “reasonably available” that meet functional requirements
 - Used for combat or “combat-related missions”



Secretary of Energy shall --

- Issue regulations to carry out Section 104
 - Will include specifics on purchaser and supplier requirements; deadlines for compliance
- Issue a standard for federal purchase of premium electric motors
 - “...agencies shall select only premium efficient motors that meet a standard designated by the Secretary...”



Why Focus on Energy Efficient Procurement?

- Significant Potential Savings
 - Federal Sector Only: 15+ TBtu/year; \$224 million
 - All levels of government: Over \$1 Billion/year
- Help Federal Agencies Meet Requirements & Goals...
 - Purchasing Requirements: Executive Orders, Federal Acquisition Regulations, EPLA 2005
 - Energy Savings Goals: 2% reduction per year; 20% reduction by 2016
 - ...using funds *already being spent* to buy or replace equipment
- Lead by Example
 - Federal government is the world's biggest buyer
 - Leverage government buying power to help transform the market



- **Make it Policy:** Communicate from the top
- **Make it Possible:** Change purchasing rules and procedures – first-cost vs “full cost” (LCC)
- **Make it Easy:** Efficiency criteria, list of products & sources
- **Make it Count:** Set example for other buyers; coordinate with market transformation programs



- Lighting
 - Fluorescent fixtures, ballasts, tubes
 - Industrial fixtures (HID)
 - Exit signs, CFLs
- Office Equipment
- Non-residential heating and cooling equipment
- Commercial refrigeration, cooking, dishwashing
- Electric motors and transformers
- Residential HVAC, appliances, lighting
- Water-saving devices
- Roofing and windows
- Low standby power products





FEMP Product Designations: Special Features

- Specifications
- Cost Calculators
- Model Language
- Product Lists*

FEMP's ENERGY COST CALCULATOR FOR COMMERCIAL BOILERS (Closed Loop, Space Heating Applications Only)		
Vary equipment size, energy cost, hours of operation, and /or efficiency level.		
INPUT SECTION		
Input the following data (If any parameter is missing, calculator will set to default value).		<i>Defaults</i>
Project Type	New Installation	<i>New Installation</i>
Deliverable Fluid	Water	<i>Water</i>
Fuel Used	No. 2 oil	<i>Gas</i>
Existing Capacity *	MBtu/h	—
Existing Thermal Efficiency *	% Et	—
New Capacity	5000 MBtu/h**	<i>5000 MBtu/h</i>
New Thermal Efficiency	80 % Et	<i>80% Et</i>
Energy Cost	\$.80 per gallons	<i>\$.40 per therm</i>
Quantity of Boilers to be Purchased	1 unit(s)	<i>1 unit</i>
Annual Hours of Operation***	1500 hours	<i>1500 hours</i>
<small>* Existing values should only be entered when Project Type is a replacement. ** 1 MBtu/h = 1000 Btu/h; 1 Therm = 100,000 Btu; 1.4 Therms = 140,000 Btu *** Value entered should be equivalent full load hours (e.g., 1000 hours @ 50% load equals 500 hours).</small>		
<input type="button" value="Calculate"/> <input type="button" value="Reset"/>		

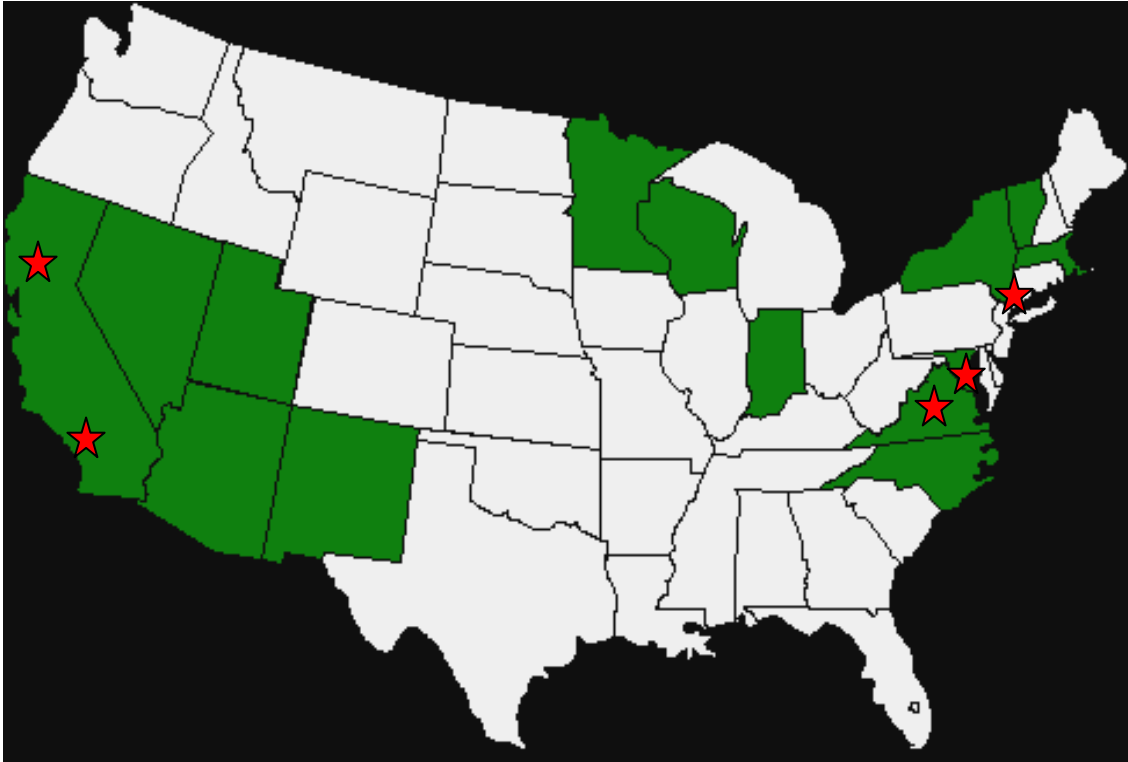
* FEMP does not have product lists available for all categories, but is working with industry groups and others toward that end.



- Opportunity to affect thousands of purchases
- Make efficient equipment the “default,” not an upgrade
- Examples:
 - Unified Facility Guide Specs
 - Army Corps: chillers
 - Navy: distribution transformers
 - EPA Green Specs
 - Whole Building Design Guide



States, Cities, and Other Nations Using FEMP Procurement Specs



***80% of
government
spending is
at state and
local levels***

- Targeted procurement can stimulate market transformation
- Same federal criteria (ENERGY STAR® or FEMP) now used by 15+ states and 6 cities including NYC
- These jurisdictions serve 40% of US population
- FEMP procurement is an international model: Mexico, China, India, European Union, South Africa 10



ESCOs and Product Manufacturers Can Help Ensure Widespread Use of EE Products

- Institutionalize EE Purchasing
 - Make EE procurement a standard operating procedure in all federal transactions including ESPCs
- ESCOs
 - Ensure that all ESPCs, including public housing and state contracts, use ENERGY STAR® and FEMP qualified products
 - Data to date?
 - Get the word out: ESPC success using EE products
 - Demonstrate that ESPCs are helping agencies comply with the law
- Product Manufacturers
 - Market your qualified products
 - Help agencies & suppliers meet legal requirements
 - Help vendors sell to federal government
 - Improve information
 - Work with FEMP, trade associations, and non-profits to develop lists of qualified products for non-ENERGY STAR® product categories
 - Help ensure that federal supply lists appropriately identify qualified vs. non-qualified products



- Procurement is an essential part of Federal energy management
- It's a non-capital intensive and effective means to reaching the 2% reduction annual goal
 - Leverage money that's being spent anyway
- Agencies will be held accountable for EE procurement
 - Included in new OMB Scorecard