Green Purchasing for Existing Buildings

September 28, 2011
Agenda

• Welcome and Introduction
• Marcus Rivas, EPA
• Alicia Culver, RPN
• Q & A
• Green Building Application Details
Questions?

Please enter your questions at any time though the GoToWebinar box on the right-hand side of your screen.

We will use them during Q & A at the end.
Upcoming RPN Green Building Webinars

- Water-efficient products
- High-performance Lighting Equipment
- Renewable Energy
- Green Cleaning
- Purchasing for LEED EBOM

If you are in EPA Regions 1, 4, 7, and 9, stay turned to learn how to apply for technical assistance for your green purchasing initiatives

www.ResponsiblePurchasing.org
A word from our sponsor …

EPA’s

Pollution Prevention Program

www.ResponsiblePurchasing.org
Measures of Success

- Reduce Greenhouse Gases
- Conserve water
- Eliminate toxic chemicals
- Save money
Measures of Success

- Reduce Greenhouse Gases
- Conserve water
- Eliminate toxic chemicals
- Save money
Benefits of Multi-Region Effort

- National scope
- New national Partnerships
- Improved assistance for Technical Assistance Programs
- Funding efficiency
Source Reduction Assistance

- Greener Purchasing
- Greener Siting/Re-purposing
- Greener Operating Rooms
EPA’s Pollution Prevention Program

Region 1
Region 4
Region 7
Region 9
EPA’s Pollution Prevention Program
EPA Source Reduction Assistance Contacts

http://www.epa.gov/p2/pubs/local.htm

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EPA Source Reduction Assistance Contacts

Region 1 – New England
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EPA Source Reduction Assistance Contacts

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EPA Source Reduction Assistance Contacts

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Region 6 -Southeast
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EPA Source Reduction Assistance Contacts

Region 7 – Midwest
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Region 8 – Mountains & Plains
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EPA Source Reduction Assistance Contacts

Region 9 – Pacific Southwest
John Katz  Katz.John@epa.gov

Region 10 – Pacific Northwest
Robert Drake  Drake.Robert@epa.gov
We now return you to your regularly scheduled program …
RPN

Nonprofit, ~200 members
- States
- Local governments
- Federal agencies
- Colleges and universities
- School districts
- Businesses
- Non-profits

RPN Mission
“Promote and practice responsible purchasing by identifying best practices, developing effective purchasing tools, educating the market, and using our collective purchasing power to maximize environmental stewardship, protect human health, and support local and global sustainability.”

www.ResponsiblePurchasing.org
Overview

- Adopting a Green Building Procurement Policy
- Greening the Building Envelope
- Specifying Green Building Equipment
- Procuring Green Cleaning and Maintenance Supplies
- Tracking and Reporting the Benefits of your Green Purchasing Activities
- Working together to make it easier
Track and Report

Meet reporting requirements
Measure success!

• Determine quantity of “sustainable” goods and services used by your facilities
  ✓ Identify challenges and opportunities
  ✓ Plan for future efforts

• Identify cost impacts
  ✓ Measure cost savings and increases
  ✓ Demonstrate the financial case for Responsible Purchasing Program
Policies for Greening Existing Buildings

• Incorporate greening of existing buildings into your sustainable purchasing (EPP) policy

• Include procurement of sustainable products in your green building policy or Climate Action Plan
Federal EO on Environmental Performance


- increase energy efficiency and use of renewable energy
- buy energy-efficient, water-efficient, biobased, non-ozone-depleting, less-toxic, recycled-content, environmentally preferable products where such products and services meet agency performance requirements
Green Purchasing Policy Goals

By incorporating environmental considerations into public purchasing, the City of San Jose, CA intends to:

• reduce impacts to human health and the environment;
• reduce its carbon footprint;
• remove unnecessary hazards from its operations;
• reduce costs and liabilities;
• fulfill its commitments under the City’s Green Vision and Urban Environmental Accords;
• meet LEED requirements for USGBC certification; and
• improve the environmental quality of the region.
City of Portland, OR
Green Building Policy

The City of Portland shall incorporate green building practices into the design, construction, remodeling, and operation of all City-owned facilities. The intent of these practices is to provide environmental benefits, create local jobs, improve employee health, productivity and the quality of workspace, and generate lifecycle financial savings for the City.

EXISTING BUILDINGS
• All occupied, City-owned existing buildings will pursue LEED for Existing Buildings Operation and Maintenance (EBOM) certification at the Silver level.
LEED for EBOM

Sustainable Purchasing, Green Cleaning, and Solid Waste Management Policies (Required)

Additional credits for purchasing

- Electric-Powered Equipment
- Furniture
- Reduced Mercury in Lamps
- Green Cleaners
- Local/Sustainable Food
- Green Ongoing Consumables
Energy Use of Buildings

US Green Business Council reports that in the United States, BUILDINGS account for:

- 70% of electricity consumption
- 39% of energy use and carbon dioxide (CO2) emissions

Energy-efficient Procurement Policies

NY State EO 111 “Clean and Green” State Buildings and Vehicles states:

“State agencies shall select ENERGY STAR energy-efficient products when acquiring new energy-using products or replacing existing equipment.”

Federal agencies are REQUIRED to follow ENERGY STAR and FEMP Guidelines.

www.ResponsiblePurchasing.org
ENERGY STAR

**Appliances**: washers, dryers, dishwashers, refrigerators

**Heating and cooling equipment**: furnaces, boilers, air conditioners, fans, water heaters

**Lighting equipment**: CFLs, LEDs, Lighting fixtures

**Miscellaneous**: food service equipment, water coolers, vending machines, battery charging systems, windows and roofing products
ENERGY STAR-Qualified Water Heaters

- High-Efficiency Gas Storage
- Gas Condensing
- Heat Pump
- Whole-Home Gas Tankless
- Solar

www.ResponsiblePurchasing.org
Appliances

CASE STUDY:
Chicago, IL public housing authority cut its annual electric bill $500,000 by purchasing 10,000 ENERGY STAR refrigerators
## Prioritize Energy Savings

<table>
<thead>
<tr>
<th>Commercial ENERGY STAR Appliance</th>
<th>Lifetime (years)</th>
<th>Lifetime CO2 Reduction (lbs)</th>
<th>Lifetime Energy Use Reduction (kWh)</th>
<th>Net Lifetime Savings ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hi-Temp Conveyer Dishwasher</td>
<td>20</td>
<td>600,000</td>
<td>380,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>(400 racks/day)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot Food Holding Cabinet</td>
<td>12</td>
<td>171,000</td>
<td>111,000</td>
<td>$6,183</td>
</tr>
<tr>
<td>(20 ft³, 15 hrs/day)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Vending Machine</td>
<td>14</td>
<td>38,000</td>
<td>25,000</td>
<td>$1,795</td>
</tr>
<tr>
<td>(600 cans, with software)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerator</td>
<td>12</td>
<td>22,056</td>
<td>14,369</td>
<td>$688</td>
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<tr>
<td>(44ft³)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ice Machine</td>
<td>8</td>
<td>20,000</td>
<td>13,000</td>
<td>$618</td>
</tr>
<tr>
<td>Water Cooler</td>
<td>10</td>
<td>5,500</td>
<td>3,600</td>
<td>$265</td>
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<tr>
<td>(hot/cold water)</td>
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</table>
# Top 10 EU for Public Buyers

Topten Pro is a purchasing guidance for professional buyers.

## Topten Pro

**Purchasing guidance for professional buyers**

- For buying the most efficient products on the market in Europe
- Range of compliant products can be checked on topten.info
- Criteria can be inserted directly into tender documents
- Regularly updated
- Simple to follow guidance based on public procurement rules

Topten Pro has been created to help public procurers and other professional buyers to make use of the Topten approach.

This means providing clear guidance on what criteria you should include in tendering in order to buy the most efficient products on the market.

## Download procurement guidelines for

- Computer monitors: [pdf](#) or [word](#)
- Laser printers: [pdf](#) or [word](#)
- Laser multifunctionals: [pdf](#) or [word](#)
- Inkjet printers and multifunctionals: [pdf](#) or [word](#)
- Energy saving lamps: [pdf](#) or [word](#)
- Cars and vans: [pdf](#) or [word](#)

## Sample tender documents for download (MS Word):

- Computer monitors
- Laser printers
- Laser multifunctionals
- Inkjet printers
- Inkjet multifunctionals
- Energy saving lamps
- Cars and vans

[www.ResponsiblePurchasing.org](http://www.ResponsiblePurchasing.org)
Top 10 USA Most Energy-efficient Products

Save energy. Lower your bills. The most efficient products you can buy. Click any category to see the Top 10.

Top 10 Reasons to Go Energy Efficient

#2 Using energy efficiency measures alone, the U.S. can go a long way toward reducing its contribution to global climate change back to 1990 levels.

All about Energy New Ways to Save

Why your electricity provider wants you to use less energy. Read More

www.ResponsiblePurchasing.org
Cool Roofing Technologies

- Coverings
- Coatings
- Vegetation

Any roof replaced on a City-owned facility will have an “ecorooﬁn” covering at least 70% of the roof and high-reflectance ENERGY STAR-rated roof material on remaining roof areas, where practical. *City of Portland, OR*
Green Lighting Policy

NYC Local Law 119

Set minimum efficiency levels for all lamps purchased by City departments

- "Super T8s"
- "NEMA Premium Efficiency" electronic ballasts

“No lamp purchased or leased by any agency shall be an incandescent lamp if a more energy efficient lamp is available that provides sufficient lumens and is of an appropriate size for the intended application.”

Green Lighting Specifications

Model bid specifications

- Energy efficient lamps and ballasts
- Long rated life
- Low-toxicity (RoHS-compliant for mercury and lead)
- Recycling required by vendor

- Prohibits “red flag” products: (e.g., T12, T9 circular), and “preheat” fluorescents; mercury vapor lamps, standard incandescents, magnetic ballasts for fluorescent lamps
- Works to lower prices on high-performance lighting equipment (e.g., LEDs and high-performance fluorescents)
ENERGY STAR-rated LED Lamps

- Energy-efficient (75% less than incandescent)
- Long life (15X longer than incandescent; ≥25,000 hours rated life)
- Mercury-free (replacement for CFLs)

Qualified list: www.energystar.gov
Renewable Energy Procurement Language


- Energy buyers shall consider renewable energy resources wherever practicable and economically feasible through lifecycle analysis and allowable purchasing preference.
Renewable Energy Procurement Decisions

- Type: Solar, wind, geothermal, hydro, etc.
- On-site vs. Offsite generation
- Electricity vs. Renewable Energy Certificates (RECs)
- Large scale vs. Small scale
Federal Government Increasing Use of Renewable Energy

US Army goal: 25% renewable energy by 2025
On Site Renewable Energy  
Alameda County, CA

Two-time EPA Green Power Leadership Award winner

• 3.1 megawatts (MW) of onsite solar generation capacity at 9 County facilities

• 10% of electrical needs in County facilities met with clean, reliable green power

• $540,000/yr electricity savings (Santa Rita Jail project)  www.epa.gov/greenpower/partners/index.htm
“The nation’s water and energy use are inextricably entwined. Energy is needed to pump, treat, transport, heat, cool, and recycle water.”

California Energy Commission

Running hot water for 5 minutes = 60 watt bulb for 14 hours

Water conservation saves energy at ~60% of cost of energy conservation

www.ResponsiblePurchasing.org
WaterSense-certified Products

Product Search

Reduce your water use while enjoying exceptional performance with the following WaterSense labeled products. Search by category, brand, model name, and/or model number, search results appear below.

Please review important product information before purchasing WaterSense labeled products.

Click to Hide Additional Search Options

Product Category
- Select One
  - Bathroom Sink Faucets/Accessories
  - Toilets
  - Flushing Urinals
  - Showerheads

Brand Name
- All Brands

Model Name
- All Models
Water-Conserving Toilets

www.ResponsiblePurchasing.org
Alternatives to Bottled Water

Colleges moving away from plastic water bottles

By Kirsti Marohn, USA TODAY  Updated 9/15/2011 1:31 AM

www.ResponsiblePurchasing.org
Best Practice
Require Claims to be Verified

“Suppliers citing environmentally preferred product claims shall provide proper certification or detailed information on environmental benefits, durability and recyclable properties.”

Source: University of California Policy on Sustainable Practices
Environmental Claims Increasing

- Eco-safe
- Environmentally friendly
- Earth friendly
- Earth smart
- Environmentally safe
- Environmentally preferable
- Essential non-toxic
- Practically non-toxic
- Made with non-toxic ingredients
- Degradable
- Natural
- Environmentally safe
- CFC-free
- Ozone friendly
- Recyclable

Original Source: Kirsten Ritche, Gensler
7 “Sins” of Greenwashing

- Fibbing “Non-Toxic”
- No Proof “Just trust us”
- Irrelevance “CFC-Free”
- Hidden Trade-Off Compostable food containers with “Teflon” coating
- Sin of Vagueness “100% Natural”
- Lesser of Two Evils Organic cigarettes
- Worshipping False Labels
Beware of Manufacturer-created Eco-Labels
Evaluate Retailer Eco-labels
Evaluate Retailer Eco-labels

Look behind eco-labels to understand what vendors are designating as “green”

- Products that **conserve energy** reduce costs and emissions associated with the burning of fossil fuels.
- Products that improve **indoor air quality** contain less toxins helping to provide employees, customers and janitorial staff with a safer environment to work and do business.
- Products that **reduce waste** help preserve our natural resources. This category includes items that help promote recycling and those that are made from renewable resources.
- Products that **conserve water** help reduce water and sewer costs as well as preserve one of nature’s most precious resources.
Best Practice
Choose Certified Green Products

Our Standards

Click here to view our criteria...
GREENGUARD

Certifies products that protect indoor air quality (are low-emitting):

- Cabinetry
- Countertops
- Flooring
- Furniture
- Wood paneling
- Other types of construction materials
USDA Biobased Certified

Certifies products that contain plant-based ingredients:

- Roof coatings
- Structural Wall Panels
- Sealants
- Lubricants
- Cleaning Products
- Paints and Coatings

www.ResponsiblePurchasing.org
Green Cleaners & Floor Maintenance Products

• Look for Green Seal- and EcoLogo-certified products
• Consider DfE-labeled products when certified products are unavailable (e.g., specialty cleaning products)
• Use metered dilution system (to reduce exposure and save money)
• Performance test, if possible
• Require vendor training & service
• Include “green” specs in cleaning service contracts
Low-Toxicity Painting Supplies

• Specify Certified Low-Toxicity Latex Paints and Coatings
  ✓ Green Seal, EcoLogo
• Performance test, if possible
• Include “green” specs in painting and renovation contracts
• Require vendors to “take-back” and recycle leftover paint

www.ResponsiblePurchasing.org
Safer Pest Management Products and Services

Adopt IPM Policy

Appoint IPM Coordinator

Procure

- Certified IPM services
- Non-chemical pest prevention products (e.g., traps)
- Safer pesticides (based on hazard prevention criteria)

www.ResponsiblePurchasing.org
Forest Friendly
Lumber, Flooring & Furniture

www.ResponsiblePurchasing.org
Carpeting

Specify (and verify compliance with) NSF/ANSI 140 (2007)

- Recycled content
- No brominated flame retardants
- Manufacturer must meet minimum recycling goals
- Extra-credit for renewable energy during production

Require vendors to recycle used carpeting
Reduce Battery Use and Waste

• Batteries increase price and environmental impact of equipment
• Factor in cost of battery replacement and disposal when ordering equipment
• Rechargeable batteries work well for many applications and have quick payback
• Use industry-financed battery recycling program
Reduce Municipal “Foodprint” of public agencies, meetings, special events, concessions, vending machines

- Buy local, seasonal, fresh, unprocessed food; avoid frozen, air freighted food
- Reduce packaged food and beverages
- Purchase less red meat and dairy; substitute chicken, pork, fish, eggs & veggie proteins
- Buy sustainably grown food
- Minimize food waste; compost whenever possible
Best Practice
Performance Test

- Engage end-users early
- Set performance criteria
  - Should be no trade-off
- Request product samples
- Conduct pilot tests
  - Try innovative products
- Only approve what works
How to Pay for Green Buildings Products

- Many “green” products less expensive upfront
- Life-cycle budgeting
- Revolving loans
- Grants
- Utility rebates
- Energy conservation service agreements
- Cooperative purchasing to lower costs
“Best Value” Procurement Favors Efficient Products

Considers overall (life-cycle) costs of ownership:

- Initial price
- Utility costs (energy, water)
- Maintenance costs (labor and replacement)
- End-of-life costs (disposal and recycling)
Refurbished Furniture

CASE STUDY:
Multnomah County, OR

- Contract for furniture refurbishment and recycling services reduces need for new furniture
- Local governments can piggy back
- 36 tons of furniture recovered for refurbishment or recycling in one year

http://web.multco.us/sustainability/sustainable-purchasing
Recycled Paint

CASE STUDY

Portland, OR found locally-made 100% recycled paint:

- costs 75% less than virgin latex paint
- meets high performance standard
- can be tinted to match specifications

- Three states (CA, OR, CT) have adopted Paint Product Stewardship Laws, CT
- CA DGS has a contract for Green Seal-certified recycled latex paint (Visions brand)
RESPONSIBLE PURCHASING GUIDE

saving green

www.ResponsiblePurchasing.org
Best Practice

Reduce Transportation Impacts

• Avoid overnight shipping, whenever possible

• Ask vendors to offer incentives for reducing the frequency of deliveries

• Reduce packaging, buy concentrated products

• Support local manufacturers & vendors, particularly certified-green businesses

www.ResponsiblePurchasing.org
Track and Report

Meet reporting requirements

Measure success!

• Determine quantity of “sustainable” goods and services used by your facilities
  ✓ Identify challenges and opportunities
  ✓ Plan for future efforts

• Identify cost impacts
  ✓ Measure cost savings and increases
  ✓ Demonstrate the financial case for Responsible Purchasing Program

www.ResponsiblePurchasing.org
Cost-Saving Strategy
Cooperative Purchasing

W20-2007

Affiliation: WSCA
Lead State: Oregon
Lead State Contract Number: 102-5031-S
Contact person: Pam Johnson
Phone: (503) 378-4731
Fax: (503) 373-1626
Email: pam.johnson@state.or.us

www.ResponsiblePurchasing.org
Best Practice
Ask Suppliers to...

• Give you their highest discounts on their “green” products
• Clearly label products that meet YOUR environmental criteria
• Require “greenest” products to be listed first via online searches
• Substitute (or suggest) green products when conventional items ordered
• Periodically report “green” spend $
Cost-Saving Strategy

Collaborate

✓ SAVE TIME by not “reinventing the wheel” by sharing research, specifications, bid solicitation documents, and vendor lists to create new “green contracts”

✓ SAVE MONEY by aggregating demand from multiple jurisdictions
Thank You!

Alicia Culver
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510.547.5475
www.responsiblepurchasing.org
RPN Resources

- **Responsible Purchasing Guides** for 15 product categories
- Webinars on “green” procurement issues
- Quarterly newsletter highlighting “green” purchasing activities and resources
- Sustainable purchasing policies and specifications
- *Model Responsible Purchasing Report*
- Calculators and other tools

[www.ResponsiblePurchasing.org](http://www.ResponsiblePurchasing.org)
RPN Purchasing Guides

Contents:
• Overview
• Social and Environmental Issues
• Best Practices
• Cost, Quality, and Supply
• Policies
• Specifications
• Standards
• Definitions
• Case Studies
• Calculators

Product Categories:
• Bottled Water Alternatives
• Carbon Offsets
• Cleaners
• Computers
• Copy Paper
• Fleets Vehicles
• Fluorescent Lights
• Food Services
• LEDs
• Graffiti Remover
• Green Power
• Office Machines
• Paint
• Toner Cartridges
• Tires, Wheel Weights
Upcoming Webinar

Green Purchasing 2.0: No Compromising on Cost & Performance

Thursday, October 13, 2011
2:00 PM - 3:15 PM  Eastern Time

https://www2.gotomeeting.com/register/736285922
Join RPN

Because Every Purchase Matters.

<table>
<thead>
<tr>
<th>Membership Benefits:</th>
<th>Consulting Services:</th>
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<tbody>
<tr>
<td>Model policies and specifications</td>
<td>Custom green specifications</td>
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<tr>
<td>Green purchasing webinars</td>
<td>Green purchasing policies</td>
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<tr>
<td>Certified green products database</td>
<td>Life Cycle Analyses</td>
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<tr>
<td>Expert sustainability speakers</td>
<td>Green office audits</td>
</tr>
<tr>
<td>Responsible Purchasing Awards</td>
<td>Cost-saving green practices</td>
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Prioritization Poll

Which of the following product categories are you planning on incorporating green changes into within the next year?

Please answer now.
RPN’s Green Building Initiative

Projects may include:

• Creating “green” purchasing specifications

• Reviewing bid responses

• Facilitate cooperative contracting opportunities for green building products or services

• Other green building initiatives with measurable results

ELIGIBLE EPA REGIONS

1: Connecticut, Maine, Massachusetts, Rhode Island, Vermont, New Hampshire

4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

7: Nebraska, Kansas, Missouri, Iowa

9: Alaska, California, Hawai’i, Nevada
RPN’s Green Building Initiative

Application details

- Download application at www.responsiblepurchasing.org/buildings
- Applications accepted until December 31, 2011
- Send to Phillip Kobernick at phillip@responsiblepurchasing.org
- Questions? Call us at 510.547.5475