

# Green Products: Buy Green and Save

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2011 Hawaii Build and Buy Green Conference

May 24, 2011



**Alicia Culver**

**Responsible Purchasing Network**

[www.responsiblepurchasing.org](http://www.responsiblepurchasing.org)

# 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.”*

# 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

# RPN Webinars

## PAST

**RPN's Responsible  
Purchasing Trends**

**LED Lighting**

**Compostable Food Service  
Ware**

**Purchasing for  
Climate Protection**



## FUTURE

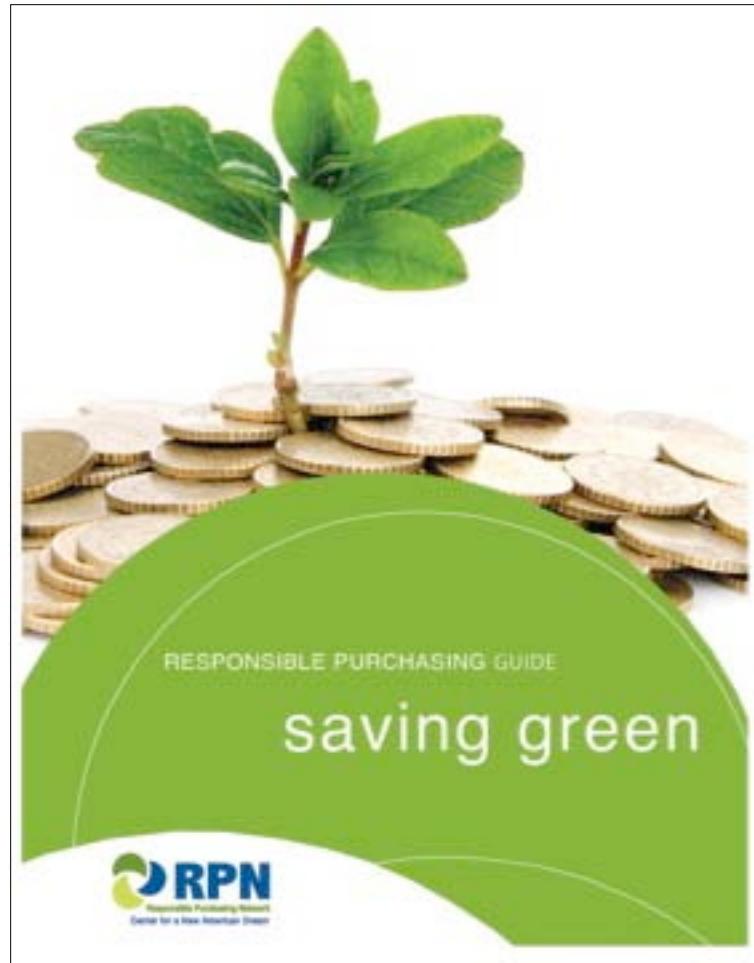
*Saving Green*

**Demystifying Ecolabels**

**Purchasing for LEED**

**Pilot Testing Green  
Cleaners**

**Safer Disinfecting  
Products & Practices**



# Environmentally Preferable Goods & Services...



**“...have a lesser or reduced effect on human health and the environment when compared to competing products and services that serve the same purpose.”**

# EPPs are...

- **Made with recycled content**
- **Highly energy efficient**
- **Designed to be long lasting**
- **Recyclable or compostable**
- **Made from renewable resources**
- **Less toxic than conventional goods**
- **Manufactured locally and responsibly**
- **Fairly traded**
- **Safely managed at the end of their life**





# “Green” Purchasing Benefits



## Progress towards:

- **Climate action commitments**
- **“Zero Waste” goals**
- **Reducing water and air pollution**
- **Minimizing toxic chemical exposures**
- **Creating local “green collar” jobs**
- **Securing green building (LEED) credits**
- **Life-cycle cost savings**





# Environmentally Preferable Purchasing (EPP) Simplified

**EPP =**  
**Environment +**  
**Price +**  
**Performance**





# What is "Greenwashing"



**Green-wash** (grēn'wōsh', -wôsh') – *verb*:  
the act of misleading consumers about the  
environmental practices of a company or the  
environmental benefits of a product or service

## **WARNING:**

Ask critical questions or you might be buying  
products with creative marketing rather than  
products with legitimate environmental benefits.

# Environmental Claims Increasing

- Eco-safe
- Environmentally friendly
- Earth friendly
- Earth smart
- Environmentally safe
- Environmentally preferable
- Essentially non-toxic
- Practically non-toxic
- Made with non-toxic ingredients
- Degradable
- Biodegradable
- Compostable
- Environmentally safe
- CFC-free
- Ozone friendly
- Recyclable

According to the FTC:  
**FALSE CLAIMS**

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**




# Multi-Attribute Certifications

search ▶

## EcoLogo<sup>™</sup> Program

Third-party certification of environmentally-preferable products


▶ Green Products ▶ Get Certified ▶ Our Standards ▶ In the News ▶ Partnerships



### Our Standards

The EcoLogo Program: Scientifically Rigorous Standards. Meet ISO 14024 standards for eco-labelling. Open, public, transparent stakeholder standard-setting process

▶ [Click here to view our criteria...](#)



Environmental Claims Validated Mark

# Single Attribute Product Certifications



Home | Contact Us | MyGREENGUARD | English

Manufacturers Architects & Designers Owners & Builders Consumers

indoor air quality certification programs technical center find products about us

## Find Products

Refine Your Search by selecting additional criteria below.

### New Search

### Product Category

### Subcategory

Cleaning Products  
General Cleaners  
Institutional Cleaning Systems

### Manufacturer

### Sustainable Credits

### Certification Type

### Quick Search

### Keyword Search

23 results found for **Cleaning Products/Systems**

Show 16 per page

1 2 > next



Bona / Bona Hardwood Floor Care System  
GREENGUARD Indoor Air Quality Certified  
GREENGUARD Children and Schools Certified



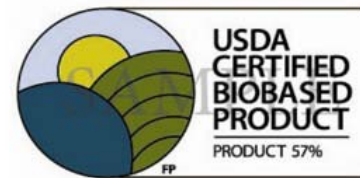
Bona / Bona Hardwood Floor Cleaner  
GREENGUARD Indoor Air Quality Certified  
GREENGUARD Children and Schools Certified



Bona / Bona® Stone, Tile & Laminate Floor Care System  
GREENGUARD Indoor Air Quality Certified  
GREENGUARD Children and Schools Certified



Bona / Bona® Stone, Tile & Laminate Floor Cleaner  
GREENGUARD Indoor Air Quality Certified  
GREENGUARD Children and Schools Certified



# Consumer Product Rating Systems

**GoodGuide** BETA

Home » Categories » Household Chemicals » Household Cleaner

## Household Cleaner Guide

Spread of ratings for all 1,008 products in Household Cleaners

246 products (29%) rated from 5 – 6.

See ratings for all 1,008 Household Cleaners products »

Only see what's: [Fragrance-Free](#) · [Not Tested On Animals](#) · [More..](#)

Find a specific product

### The Best Household Cleaners

	Seventh Generation Toilet Bowl Cleaner, Emerald Cypress & Fir	8.9
	Method Wood For Good Spray	8.7
	Messeance Buzz Free Zone Personal Spray	8.6

### The Worst Household Cleaners

	Kleen Guard Furniture Polish, Fresh Lemon Formula	2.5
	Prestone with Odor Neutralizer Carpet & Upholstery Cleaner	2.5
	Rite Aid Automatic Toilet Bowl Cleaner with Bleach	2.7

Switch to healthier, greener products! Recently recommended:



# How “Green” Products Can Save Money



- ✓ **Lower upfront costs**
- ✓ **Conserve energy or water**
- ✓ **Reduce paper or fuel use**
- ✓ **Lower maintenance costs**
- ✓ **Reduce replacement costs**
- ✓ **Avoid disposal/cleanup costs**
- ✓ **Support the local/regional economy**
- ✓ **Offset environmental and health program costs**

# “Best Value” Procurement

## Considers total (life-cycle) costs of ownership

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



# King County “Green” Purchases and Savings

In 2009, King County, WA purchased \$37.6 million in EPPs and **saved >\$1.5 million.**

<b>Commodity</b>	<b>2009 Savings</b>
Aggregates <sup>2</sup>	300,000
Toner Cartridges	259,000
Tire Retreading	146,000
Antifreeze	27,000
Purchase of recycle oil	18,000
Energy Saving Software	150,000
Motor Oil (sell used oil)	50,000
Avoided Landfill	600,000
<b>Total Dollars:</b>	<b>\$1,550,000</b>

# Remanufactured/XL Toner and Ink Cartridges

## Remanufactured toner cartridges:

- ✓ Cost 30-60% less per copy than “virgin” cartridges
- ✓ Can create jobs locally



## XL ink/toner cartridges

- ✓ reduce replacement costs, save time

## Returning empties

- ✓ can reduce disposal costs, yield rebates

# Remanufactured/XL Toner and Ink Cartridges

**On Hawaii Contract – Office Supplies and Printer  
Cartridges (Statewide) RFP-10-003-SW**

**Vendor – Hawaii Stationary**

<http://www4.hawaii.gov/spo/pricefiles/11-07%20cr5.pdf>



# 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



*CA DGS has a contract for Green Seal-certified recycled latex paint (Visions brand)*





# Re-refined Motor Oil



## CASE STUDIES

- ✓ **Santa Monica, CA purchases re-refined motor oil for all its Fleet vehicles; costs 25% less than comparable “virgin” motor oil**
- ✓ **Santa Clara County, CA is saving ~\$40,000 annually by procuring re-refined motor oil using a contract issued by City of San Jose**



# ENERGY STAR-rated Products

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

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

**Lighting equipment:** CFLs, LED fixtures and lamps

**Office equipment:** computer equipment, copiers, printers, power supplies, mail machines

**Electronics:** telephones, TVs, DVD players, etc.

**Miscellaneous:** food service equipment, water coolers, vending machines, battery charging systems, windows and roofing products



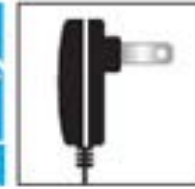
# Energy-Efficient Equipment

## CASE STUDY

**Chicago, IL public housing authority cut its annual electricity bill \$500,000 by purchasing 10,000 ENERGY STAR-rated refrigerators**



# Ancillary Equipment



Powered by an  
ENERGY STAR®  
qualified adapter  
for a better  
environment

## Power adaptors use >2% of US electricity

- ✓ ENERGY STAR-rated (80 PLUS) power adapters  
~30% more efficient than conventional models

## “Smart” Power Strips

- ✓ Detect whether user is present
- ✓ Eliminate phantom loads by cutting power to outlet



# ENERGY STAR Products in Hawaii

- **American LED and Energy Corporation**
- **CertainTeed Roofing Products Group**



**ENERGY  
STAR**

## **STEEP-SLOPE SHINGLES**

### **Symphony™ Slate Series**

Enduring architecture deserves historic detail backed by contemporary building science. Symphony composite slate roofing makes a stunning statement in good taste that recreates the craft of the slaters hammer with impeccable precision. Fine lines. Earthen tones. Gradations of stone on stone...and all at a fraction of the cost of slate.

- UL Certified
- 50-year limited transferrable warranty
- 7-year SureStart™ Protection

*Available in Colonial Gray, Capital Blend and Evergreen.  
Does not qualify for tax credits.*

# Computer Equipment

*According to the EPA, more than **11 billion kWh**, the equivalent of **\$935 million**, could be saved each year if users of the **55 million office computers in the U.S.** used the power management features on their computers effectively.*






# Green Computers

## Electronic Products Environmental Assessment Tool

Estimated Environmental Benefits from 2007 EPEAT Purchasing

	Reductions	Equivalents
Electricity	42.2 Billion kWh	Annual consumption of 3,723,185 US households
Primary Materials	75.5 million metric tons	Weight of 585,092,145 refrigerators
Air Emissions	174,393,139,000 kg	174,393,139 metric tons
Water Emissions	364,789,000 kg	364,789 metric tons
Greenhouse Gas Emissions	3.31 million metric tons	Removing 2,630,619 US cars from the road for a year
Toxic Materials	3220 metric tons	Weight of 1,609,545 bricks The amount of mercury in 482,381 fever thermometers
Hazardous Waste	124,000 metric tons	Weight of 61,831,455 bricks
Cost Savings	\$3,660,553,851	

				Total
Product	BRONZE	SILVER	GOLD	
Desktops	<u>5</u>	<u>47</u>	<u>69</u>	<u>121</u>
Integrated Systems	0	<u>24</u>	0	<u>24</u>
Monitors	<u>6</u>	<u>365</u>	<u>30</u>	<u>401</u>
Notebooks	0	<u>334</u>	<u>46</u>	<u>380</u>
Totals	<b>11</b>	<b>770</b>	<b>145</b>	<b>926</b>

✓ **23 required and 28 optional criteria across 8 categories**

✓ **Meet standards for ENERGY STAR (required)**

► [www.epeat.net](http://www.epeat.net)

# CFLs

## CASE STUDY

**Commonwealth of Massachusetts saved money switching from incandescent lamps to CFLs:**

- ✓ **\$1.9 million annual energy cost savings**
- ✓ **\$765,000 annual labor cost savings**
- ✓ **>\$2.6 million total savings**  
**(excluding initial cost difference)**







# LED Street Lights

## Life-cycle cost savings compared to high-pressure sodium (HPS)/metal halide (MH) street lights

- ✓ Costs dropping ~20% annually (DOE)
- ✓ 35%-75% energy savings (more with dimming)
- ✓ 2-4X longer life; non-cycling  
(lower replacement/labor costs)
- ✓ No mercury disposal or UV exposure
- ✓ Improved visibility, security
- ✓ Can power with solar/wind (no utility cuts)



# LED Lighting Vendors in Hawaii

- **American LED and Energy Corporation**
- **Inovus Solar**
- **LED Hawaii Hoku Nui**



# Water Conserving Products

*“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**

**PACIFIC RIM PARTNERS, LLC**

Manufacturers' Representative serving Hawaii and Guam

# Duplexing Printers/Copiers

**Save money on paper, postage and document storage**



## **CASE STUDY**

- ✓ **Columbia University saved \$105,000/year by defaulting to 2-sided printing in its computer center**



# Batteries



- ✓ **Factor in battery costs when choosing equipment**
- ✓ **Pilot test/utilize rechargeable batteries (try hybrid/slow drain rechargeables)**
- ✓ **Consider “long-life” single-use batteries**
- ✓ **Require vendors to offer battery recycling services**



## Rocket Air Blowers



- ✓ Just uses air.
- ✓ \$9.95
- ✓ You just need one.

## Replace Gas Dusters



- ✓ Contains Refrigerant:
- ✓ 1,1-Difluoroethane =  
**GHG 120X > CO2**
- ✓ Some brands contain HFC 134a  
1,1,1,2-Tetrafluoroethane  
= **GHG 1300X > CO2**
- ✓ \$5-\$15/can; you need many



# On Site Renewable Energy

## Alameda County, CA

### Two-time EPA Green Power Leadership Award winner

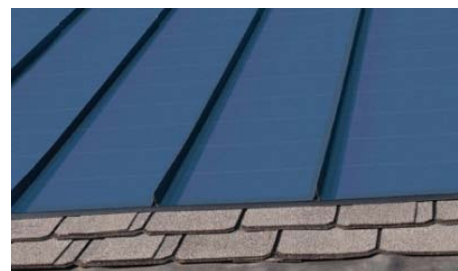
- **3.1 megawatts (MW) of onsite solar generation capacity at 9 County facilities**
- **10% of electrical needs in County facilities met with clean, reliable green power**
- **\$540,000/yr electricity savings (Santa Rita Jail project) [www.epa.gov/greenpower/partners/index.htm](http://www.epa.gov/greenpower/partners/index.htm)**





# Solar Providers in Hawaii

- **ADI Solar Corporation**
- **Hawaii Home Expo**
- **CertainTeed Roofing Products Group**
- **Hi-Power Solar, LLC**
- **Hawaiian Island Solar**
- **RevoluSun**



# Bottle-less Cooler Systems

- ✓ **Reduce monthly water costs 30-70% versus bottled water delivery**
- ✓ **Save time lost to changing bottles, especially in larger offices.**
- ✓ **Eliminate chance of employees hurting their back while lifting heavy water bottles**



***RPN's Responsible Guide to Bottled Water Alternatives***

# Bottled Water Alternatives

## Case Study

### University of Winnipeg

Cost of Bottled Water	Cost of Drinking Fountains	Savings over 5 Years
<b>\$655,755</b> (5 year contract)	<b>\$419,000 - \$639,000</b> (Installation in year 1 and yearly maintenance costs for 4 years)	<b>\$16,755 - \$236,755</b>



**Example of a water fountain at the University of Winnipeg that has been upgraded to include a spigot for use with reusable bottles.**





## Bottled Water: Calculator

This Bottled Water Calculator, developed by RPN, compares the cost and environmental impacts of 16.9 oz. bottles of water with tap water. Results are expressed in gallons of water, mega joules of energy, gallons of oil, pounds of CO<sub>2</sub>e, and dollars saved.

Edit the values below and click update.

### How much water do you drink?

Enter the total number of 16.9 oz. bottles of water purchased by your organization in a year:

Cost of Tap Water per Gallon (\$ per gallon):

(If you know your local cost, please enter - otherwise leave the national average.)

Cost of 16.9 oz Bottle of Water (typical is \$1.50):

### Impact

Total Water Drank:	<b>1,563</b>	gallons
Extra Water Required for Production and Purification:	<b>3,125</b>	gallons
Energy Required for Manufacturing:	<b>1,006</b>	megajoules
Oil Required to Produce the Plastic Bottle(s):	<b>248</b>	gallons
CO <sub>2</sub> e to Manufacture Plastic Bottle(s):	<b>1,875</b>	pounds

**Your Extra Cost for Bottled Water: \$14,980.00**



# Green Cleaning

## CASE STUDY

**Minneapolis, MN conducted 3-year “green” cleaning pilot test and reported:**

- ✓ **Cost savings moving to metered dilution system away from hand mixing**
- ✓ **Fewer sick days for custodial staff**
- ✓ **Reduced waste and other liabilities**
- ✓ **Improved indoor air quality (IAQ)**



# Green Cleaners Save \$

## Reducing variety of products used

Replacing 20 products with 1 Green Seal product saved \$280,000/year at Riverside Military Academy, Gainesville, GA

## Reducing amount of chemicals used via best practices, dilution equipment

Palm Beach schools saving \$360,000/yr

## Purchasing with procurement contracts

Novato Unified switched with no additional cost;  
Waxie offers 45% discounts through WSCA contract

*Source: Green Schools Initiative*





# Hawaii Green Cleaning Pilot Project

-- **DBEDT/DoE Lead by Example Initiative**  
-- **Evaluated certified green cleaning products and practices that protect human health and environment in Honolulu, HI**

- ✓ **Elementary school**
- ✓ **High school**
- ✓ **State-funded university**
- ✓ **State office buildings**



# Documented Benefits

- ✓ **Cost savings**
- ✓ **Health & safety improvements**
- ✓ **Equivalent or better performance**
- ✓ **Time savings**
- ✓ **Smaller storage footprint**
- ✓ **Environmental benefits**







# Cost Savings: Disinfectants



Product	Size	Cost	Cost/Gal
Conventional (NABC)	55 gal drum	~\$380	\$6.90
Conventional (NABC)	55 1-gallon bottles	~\$660	\$12.00
Green Alpha HP (1:64)	2 1/5 1.5L bottles	~\$54 (Waxie)	\$0.96

# Documented Performance



# Microfiber Mops

- ✓ **Cost-effective (life-cycle basis)**
- ✓ **Reduce chemical use (~1/2)**
- ✓ **Minimize water use (up to 95%)**
- ✓ **Prevent injuries (chemical exposure, back strain, accidents)**
- ✓ **Improve performance (reduce dirt, avoid cross-contamination)**

[www.sustainablehospitals.org/PDF/tenreasonsmop.pdf](http://www.sustainablehospitals.org/PDF/tenreasonsmop.pdf)

[www.epa.gov/region09/waste/p2/projects/hospital/mops.pdf](http://www.epa.gov/region09/waste/p2/projects/hospital/mops.pdf)





# Hand Soap



- ✓ **Foaming hand soap reduces soap and water usage compared to liquid hand soap**
- ✓ **Push-operated hand soap dispensers eliminate battery purchase, installation and disposal costs associated with hands-free dispensers**



# Green Products with Grainger

- Energy Conservation
- Green Cleaning
- Waste Reduction
- Water Conservation



## JOHNSONDIVERSEY Cleaner, 1.5l, Pk2

Cleaning > Chemicals > Cleaners

General Purpose Cleaner, Ready To Dispense Dilution Control System, Size 1.5 Liters, Clear Color, Cit Gal per Concentrated Container, Recommended Dilution 1:16-1:128, pH Value 1, Green Seal Certified,

Grainger Item #	2NY12
Price (pk.)	\$94.45
Package Qty.	2
Brand	JOHNSONDIVERSEY
Mfr. Model #	ALL-IN-ONE H2O2 CLEANER
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	8.4
Usually Ships**	Today
Catalog Page No.	N/A
Country of Origin (Country of Origin is subject to change.)	Canada



Enlarge Image

Qty.

Add to Order Add to Personal List Compare Alternates

Price shown may not reflect your price. [Sign in](#) or [register](#).

Tech Specs	Additional Information	Compliance & Restrictions	MSDS	Required Accessories	Optional Accessories
Item	General Purpose Cleaner				
Type	Ready To Dispense Dilution Control System				
Size	1.5 L				
RTU Yield per Container	26 gal.				
Recommended Dilution	1:16 to 1:128				
Color	Clear				
Fragrance	Citrus				
Standards	Green Seal Certified				
Green Environmental Attribute	Not Applicable				
Green Certification or Other Recognition	Green Seal Certified				

# Cost-Saving Strategy: Require Recycling

✓ Saves time/money by shifting responsibility for recycling to manufacturers and distributors



✓ Stimulates infrastructure for efficient recycling

✓ Encourages manufacturers to redesign their products to be more durable, more easily recyclable, and less toxic





# Electronics Recycling



**e-Stewards**  
THE GLOBALLY RESPONSIBLE WAY  
TO RECYCLE YOUR ELECTRONICS

Home

About us

Find e-Stewards Recyclers

The e-waste crisis

Recycling resources

e-Stewards Certification

News + Media



e-waste in Gulyu, China is often simply burned

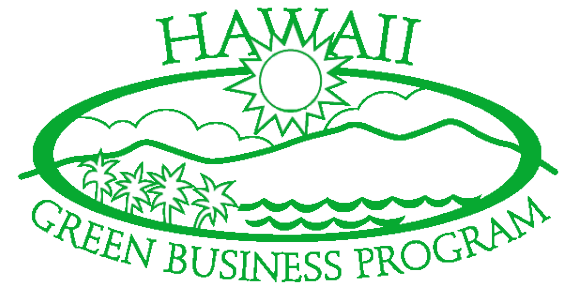
resulting in severe pollution of ground, water, and air.

# Buy Local

**Support local and regional manufacturers and distributors**

- ✓ **Reduces transportation impacts (and costs)**
- ✓ **Contributes to local tax base**

**Give preference to locally-certified Green Businesses**



**Palo Alto office supplies bid solicitation gives “points” for copy paper made <1000 miles**



# Local Food Purchasing



## CASE STUDY

**Portland, OR bought 45% local produce for county jail at no extra cost**

## Hawaii Seasonality Chart:

<http://hawaii.gov/hdoa/add/md/buyfreshposter.pdf>

*Island Fresh*  
**Buy Local**  **It Matters**  
Join the movement!

# Cost-saving Strategy: Reduce Packaging

- ✓ **Encourage vendors to offer reusable and recyclable packaging**



# Cost-saving Strategy: Reduce Transportation Costs

- ✓ **Avoid overnight shipping, whenever possible**
- ✓ **Ask vendors to offer incentives for reducing the frequency of deliveries**
- ✓ **Focus on reducing heavy, disposable products**



# Cost-saving Strategy: Direct Suppliers to...

- ✓ Give you their highest discounts on the “green” products in their offering
- ✓ Conduct training and outreach
- ✓ Periodically report \$ amount of compliant/non-compliant purchases sold on your contract – as well as cost savings



# How to Pay for Sustainable Products

- ✓ Many “green” products less expensive upfront or competitively priced
- ✓ Reduce consumption
- ✓ Life-cycle budgeting
- ✓ Revolving loans
- ✓ Grants
- ✓ Utility rebates
- ✓ Energy conservation service agreements





# Cost-Saving Strategy:

## Prioritize

- **Largest potential impact**
- **Ability to meet environmental/health goals**
- **Opportunities for change  
(contracts re-bid)**
- **Ease of implementation  
(use existing specs)**
- **Potential to save money/create local jobs**





# Cost-Saving Strategy: Institutionalize EPP

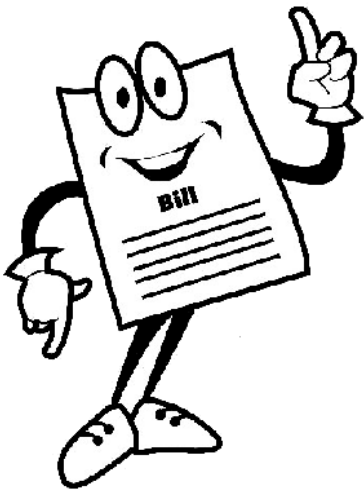
- **Don't try to do it on your own.**
- **Get top level support**
- **Assemble a “Green Team”**
- **Establish communication and outreach strategies**
- **Adopt sustainable purchasing policy and/or administrative guidelines**



*See 10 Steps to Starting a Sustainable Purchasing Program on RPN website)*



# Hawaii EPP Law: HRS 196-9



**Directs state agencies in Hawaii to procure environmentally preferable products, including recycled-content, bio-based and other resource-efficient products and materials.**

[www.capitol.hawaii.gov](http://www.capitol.hawaii.gov)

# Upcoming RPN Webinar

## Cutting-Edge Eco-Labels



Environmental Claims Validated Mark

**June 14, 2011**

**Registration opening soon!**

**[www.responsiblepurchasing.org](http://www.responsiblepurchasing.org)**

# Thank You!



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**[www.responsiblepurchasing.org](http://www.responsiblepurchasing.org)**