

Public Procurement of Energy Efficient Products

Lessons from Around the World

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Why is EE important?

- Enables economies to grow without exacerbating climate/environmental impacts
- Lowers jurisdictions' operating costs (frees up \$ for vital social services)
- Reduces reliance on imported fuel
- Conserves natural resources
- Reduces air pollution, including CO2 emissions



Why is the public sector important?

- **Public sector ~2-5% of total energy use**
 - Could be 20-30% in countries with large heating loads or low energy access
- **Government often single largest energy user**
 - Visible consumer (public facilities)
 - Drives market (spurs companies to redesign or certify their products)



10 Case Studies



■ Countries/Regions

- Australia
- China
- European Union
- India
- Japan
- South Korea
- United States

■ Cities

- Portland, Oregon (USA)
- Vancouver, British Columbia (Canada)
- Vienna (Austria)

EE Barriers and Responses

Barriers	Responses
Lack of information	Awareness campaigns, case studies, guidelines/criteria, catalogues, specifications, EE product labels
Lack of technical capacity	Nodal agencies; energy managers; EE training, standards, analytical tools, verification methods
Limited Incentives	Retention of energy savings; awards, case studies, performance reviews; risk sharing/financing programs
Lack of agency accountability	EE targets, monitoring/reporting, penalties for nonperformance, building energy performance labels
Restrictive rules	Revise public policies, allow LCC, local ESCO models
Lack of funding	Public EE budgets, grant/loan programs, DSM surcharges, free energy audits
Small size and high costs	Bundle public EE projects; model tender documents; ESCO umbrella contracts; cooperative purchasing

Types of EE Procurement Policies

- EE Procurement Policies
- Product-specific Policies (Green IT, Fleets)
- Green/Sustainable Procurement Policies
- Best Value Procurement Policies
- Green Building Policies



Trends in Public Procurement

■ Harmonization

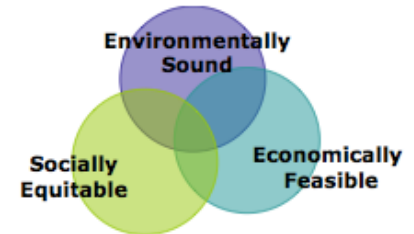
- Better coordination, trade across borders

■ E-procurement

- Promotes transparency, identification, tracking

■ Sustainable procurement

- Promotes environmental stewardship, economic and social responsibility



EEP vs. GPP

■ Energy Efficient Procurement (EEP)

- Promotes acquisition of EE products
- Includes energy savings in cost comparison
- Relatively simple LCC and specifications

■ Green Public Procurement (GPP)

- Promotes environmentally preferable product acquisition (EE = key attribute)
- Includes energy savings and other environmental benefits in cost comparison
- Relatively complex LCC, certification and reporting

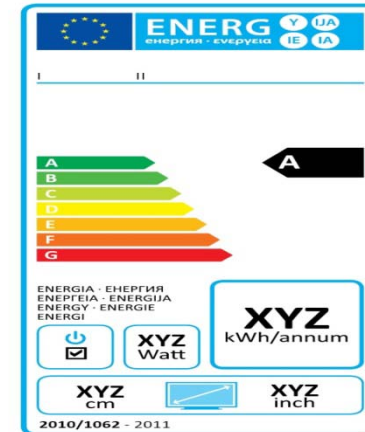


EEP Tools

Tools	Countries
Labels	Australia, Vancouver (Canada), EU, Japan, Mexico, South Korea, U.S.
Catalogues	Vienna (Austria), EU, Japan, Mexico, Sweden, United Kingdom, U.S.
LCC/Best Value Award	Canada, EU, United Kingdom, U.S.
EE Preferences	Australia, China, Japan, EU, South Korea, U.S.
Qualifying Product Database	Vienna (Austria), China, EU, South Korea, United Kingdom, U.S.

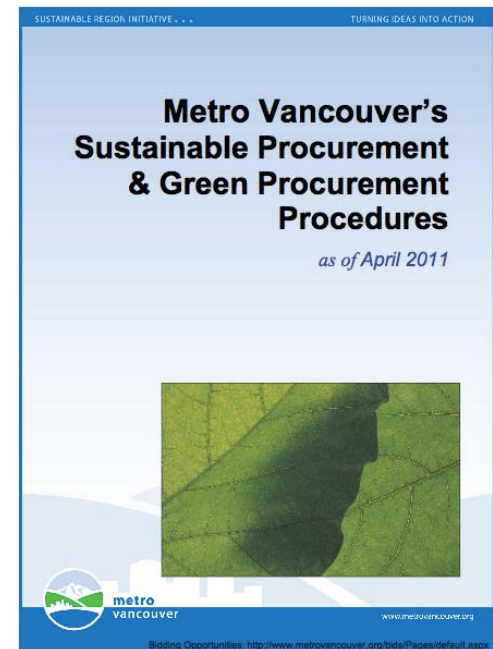
Labels

- EE Endorsement Labels
- EE Comparative/Rating Labels
- Eco-labels



Catalogues of Specifications

- Used when labels don't exist, to combine EE and other green criteria, and to harmonize specs among jurisdictions or agencies
- **Examples:** EU, Metro Vancouver (Canada), U.S.



LCC/Best Value Awards



- **Reward most cost-effective product over time**
 - Looks at initial price, operating/maintenance costs, end-of life value/costs
 - Favors energy- and water-efficient products
 - Purchasers need training, technical support, tools
- **LCC calculators for EE products, vehicles**
 - Energy and Cost Savings Calculators – US FEMP
 - Buy Smart Calculator – Europe
 - Compare Vehicles web tool – Canada

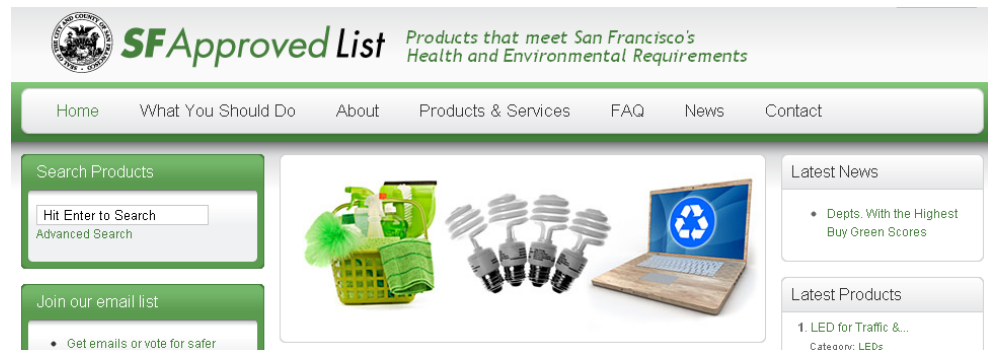


EE Preferences

- **Voluntary incentives for EE products**
- **Types of EE preferences**
 - Extra points in bid evaluation process if product meets or exceeds EE criteria
 - Price preference (price premium for EE or green)
- **Examples**
 - Alternative Bidding System with Extra Points (South Korea)
 - Comprehensive (Voluntary) GPP Criteria (EU)

Qualifying Product Databases

- Lists of qualified products shows range of models
- Convenient for procurement agents
- Facilitate cooperative purchasing
- Time-consuming to create, maintain



Institutional set-ups

Name	Countries
Centralized (nodal) agency	Denmark, Finland, Japan, Sweden, United Kingdom
Shared management, or steering group	Australia, China, EU, Germany, South Korea, City of Portland, Oregon (U.S.), U.S., City of Vienna (Austria)
Local government association	Mexico, U.S.
NGO	Canada, EU, India, Japan, U.S.

U.S. DEPARTMENT OF
ENERGY | Energy Efficiency &
Renewable Energy

Federal Energy Management Program



Green Purchasing Network (GPN)

Product Testing and Certification

■ Who does it?

- Nodal agency, another public entity, NGO

■ How are standards set?

- Conduct LCC/VFM/technology/market assessments, identify top % in class that meet performance criteria
- Evaluate EE labels, availability of certified products
- Adopt product-specific standards: lamps (lumens/watt); vehicles (liters/km, miles/gal)



Training and Outreach

- Information and education needed to inform public officers on policies, programs, resources
- Face-to-face, online, self-paced courses
 - Up to date content, highlight “best” practices, customizable
- Target managers, technical officers, and procurement staff
- Provide info resources through workshops, websites, outreach efforts



Incentives for Behavior Change

Incentive Type	Institutional	Individual
Voluntary	Budget retention for energy savings	
	Financial incentives (grants, loans)	Performance bonus, time off
	Agency recognition and awards; publicizing success stories	Recognition and awards for staff (fame and shame)
	Regional/Institutional cooperation	Departmental competitions
	Performance reviews/Job advancement	
Mandatory	Laws and regulations	
	Reporting requirements	
	Agency energy efficiency targets	Departmental and unit targets

Partnerships

■ Intergovernmental Partnerships

- Harmonize standards, share best practices, aggregate demand (cooperative purchasing)

■ Partnerships with Businesses

- Gain technical information and industry buy-in
- Provide hands-on technical support, develop eco-labels
- Utilities offer rebates, free audits, financing, etc.

■ Non-profit Partnerships

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- Conduct outreach/education; develop tools, eco-labels, policies; monitor progress



Public Services Alliance
California Communities
Canadian Communities
Compliance Services
U.S. Communities

Monitoring/Reporting



- Documents success, promotes accountability, identifies challenges and opportunities
- Consistently deficient (costly, decentralized)
- **Compliance Monitoring**
(*China, EU, Japan, South Korea, Thailand, US*)
 - # of jurisdictions/agencies with policy/program/action plan
 - \$/# of contract actions with EE/green specs
- **Results Reporting** (Australia, Mexico, Vienna)
 - \$/energy savings, CO2 reduction, environmental benefits)

Alternative Procurement Strategies

BARRIERS	INACCURATE LCC	CHANGING PRODUCTS	PROPRIETARY TECHNOLOGIES	PERFORMANCE RISK
LCC analysis by bidders	✓	✓	✓	
Output-based procurement	✓	✓	✓	
Product competition		✓	✓	
Energy use warranties				✓
Performance-based warranties				✓
Energy supply contracting	✓	✓	✓	✓
ESPCs	✓	✓	✓	✓

Main Observations

- Growing number of EEP programs in developing countries; trend toward GPP in developed countries
- Substantial anecdotal information on the benefits of EEP programs
- Most governments do not have enforcement mechanisms in place
- Few programs fully account for the costs and impacts
- Wide variety of resources exist to assist developing countries

Key Recommendations (Part 1)

EEP Program Elements	Recommendations
Policy	• Adopt EEP policy and set targets • Make EEP the “default” option
Tools	• Create/disseminate tools
Institutional Arrangements	• Establish EEP program infrastructure • Assign roles & responsibilities • Engage procurement, energy, environmental staff
Product Testing & Certification	• Accredit testing labs/certification bodies • Spot check products if manufacturers self-certify • Consider using existing labels • Start with simpler, common products • Update standards

Key Recommendations (Part 2)

EEP Program Elements	Recommendations
Outreach & Training	• Deploy aggressive outreach/training programs • Focus on how and why to purchase EE products • Offer online & in-person courses based on feedback • Target purchasing agents and key product end-users
Incentives and Behavior	• Establish mandatory EEP program procedures and reporting • Offer voluntary incentives
Partnerships	• Collaborate/consult with other jurisdictions, NGOs, business • Consider cooperative purchasing initiatives
Tracking & Reporting	• Develop compliance & results reporting plan with indicators • Use e-procurement and vendor reporting systems • Evaluate program periodically to assess effectiveness/impacts

Getting Started

Test new procurement options

Foster strategic partnerships

Update technical specifications

Track and monitor the EEP policy

Make the EEP policy mandatory

Develop a set of tools, training and incentives

Begin with a small set of products

Adopt a voluntary EEP policy first

Thank you!

*For more information,
please visit: www.esmap.org*