



NATIONAL ASSOCIATION OF
ELECTRICAL DISTRIBUTORS

Smart Tools for Smart Distribution®

Sustainability Best Practices: *A Case Study Series*

Overview

Governments, private businesses, educational institutions, and non-profits are adopting sustainable purchasing programs to reduce their environmental impacts.

Sustainable purchasing looks at where materials come from, how products are manufactured, and the energy and resources consumed in the use and eventual disposal of products.²

This case study will explore how sustainable purchasing impacts customer buying decisions and brings savings, while also covering customer expectations and sales tips.

The Swedish Medical Center in Seattle, WA, reaped significant savings through sustainable purchasing. By focusing on recyclable and reusable products, it saved \$16 million annually by reducing supply expenses from 23% to 17.2% of net revenues.⁴

Sustainable Purchasing Programs

Case Analysis: Benefits, Customer Expectations, Sales Tips

What are the benefits of sustainable purchasing to a distributor's customers? How can a distributor sell to an end-user with a sustainable purchasing program? Since many electrical distribution customers are looking to sustainable purchasing as a way to reduce environmental impacts, opportunities exist for selling more durable products.

Sustainable purchasing integrates sustainability considerations into product selection to minimize the impact on society and the environment throughout the life-cycle of the product (from initial extraction through manufacture to final disposal or recycling).

Implementing sustainable purchasing requires organizations to understand the full range of product costs. To do this, the total cost of ownership over the life-cycle of a product must be considered.

When the environmental impacts of purchasing are considered, organizations tend to buy products that are more durable because they last longer.

Sustainable purchasing helps organizations effectively manage the products they buy and use, reducing costs, and increasing efficiency. Sustainable products and services typically require less energy, water, and other resources in their production and/or operation, resulting in reduced utility and waste disposal costs.³

SUSTAINABLE PURCHASING PROGRAMS:

Target "products or services that have a lesser or reduced effect on human health and the environment when compared to competing products or services that serve the same purpose."¹

Customer Expectations

Several electrical distribution customer segments, including governments, private businesses, educational institutions, and non-profits, are considering sustainable purchasing for environmental and cost-saving reasons. This case study will examine the needs of each customer segment.

Federal Agencies: Implementing Sustainable Purchasing

Sustainable purchasing regulations for federal agencies began in 1993 and have undergone several revisions, the most recent being [Executive Order 13432 – Strengthening Federal Environmental, Energy, and Transportation Management](#).

[U.S. Communities](#) is a nonprofit, national government cooperative purchasing group set up by government agencies to create purchasing contracts available to all public agencies. Connie Kuranko, the Green Product Manager for U.S. Communities, described the organization and their sustainable purchasing program:⁵

“Our first goal was to catalog all of the green products available in our current contracts so that any purchaser could come to our website, search and see which green products were available,” Kuranko said. “We worked with our suppliers to determine what was green, then we created a database and a way to search green products.”

“*Suppliers must tell us if a product meets a certification or standard and provide a description of how it’s green, so our agencies can determine if it meets their green policy.*”

—Connie Kuranko,
U.S. Communities

AGENCY PROFILE U.S. COMMUNITIES

According to Connie Kuranko, U.S. Communities has 35,000 agencies using its sustainable purchasing system. This gives it buying power, giving even the smallest agency or nonprofit the same buying power as a state government. U.S. Communities works to save taxpayer dollars by making cooperative contracts available to local agencies.

U.S. Communities is run by a board of directors and an advisory board of purchasing professionals. In 2006, the board members asked questions about green mandates, so U.S. Communities made environmental purchasing a key priority, with Kuranko as the project lead for its green initiative.



To determine if a product is green, U.S. Communities employed several green product third-party certifications, such as [ENERGY STAR™](#), [Electronic Product Environmental Assessment Tool \(EPEAT\)](#), [Green Seal](#), and [EcoLogo](#).

“We don’t have the expertise to research those products and make sure they are actually green, which means we have to rely on standards and certifications,” said Kuranko. “Our advisory board and our greenest purchasers said they would like everything that the supplier says is green included as long as there’s information that explains how it’s green. That way, they can determine if it meets their needs.”

“Not every product category has a standard you can meet. For example, refillable pens and pencils are greener than non-refillable ones, but there’s no standard for that. Suppliers must tell us if a product meets a certification or standard and provide a description of how it’s green, so that our agencies can determine if it meets their green policy.”

Healthcare Organizations: Identifying Harmful Product Substances

Many healthcare organizations are using sustainable purchasing programs to filter potentially harmful substances out of the products they buy.

Rachael Baker, an Environmental Supply Chain Manager, described the chemicals of concern at healthcare organization Kaiser Permanente (KP):⁶

“Through research, we’ve witnessed the connection of core adverse environmental and human health issues with health outcomes of our members, patients, staff and communities,” Baker said. “While KP scientists and physicians perform our own research, we also look externally to the research and science community to illuminate issues and concerns.”

For example, Baker says that chemicals of concern include persistent bio-accumulative toxins and polyvinyl chloride (PVC). The company has also worked on other issues such as indoor air quality. Since 2001, KP has been working on getting PVC and Di (2-ethylhexyl) phthalate (DEHP, a common plasticizer) out of its neonatal intensive care units.

Kaiser Permanente outlines 10 chemicals of concern in its environmental policy including:

- >> persistent bio-accumulative toxins
- >> carcinogens
- >> mutagens
- >> reproductive toxins
- >> halogenated and chlorinated fire retardants
- >> latex
- >> mercury
- >> phthalates
- >> PVC (polyvinyl chlorides)
- >> VOCs (volatile organic compounds)



Higher Education: Setting and Meeting Policy Goals

Universities and colleges often have sustainable purchasing programs. Cindy Pollock Shea, Director of the Sustainability Office at the University of North Carolina at Chapel Hill, described the energy efficiency aspects of their sustainable purchasing program:

“Through our vice chancellor’s sustainability advisory committee, we’ve gotten several policies approved on campus. A new policy related to energy efficient purchasing says that when buying an electricity consuming product, if there’s ENERGY STAR-certified options, then you must buy one rated for ENERGY STAR.”

According to Pollock Shea, the university also applies the LEED checklist on all of capital projects. University

staff has customized LEED checklists, looking at which credits it would require on every capital project, which credits would apply to most projects, and which credits would apply based on program and budget.

Sustainable purchasing also applies to the university’s buildings. Shea explained, “Additionally, legislation was passed in 2007 that requires all our new buildings larger than 20,000 square feet to be 30% more energy efficient than ASHRAE 90.1-2004, 20% more water efficient, and to use 50% less outdoor water for irrigation purposes.”

“*In terms of efficient systems in buildings, our policy for new construction is that it aims to out-perform California’s already strict energy code by 20% or more.*”

—Matthew St. Clair

For the University of California, sustainability is a key factor in purchasing, but purchases aren’t micro-managed. Matthew St. Clair, Sustainability Manager with the University of California, explained:

“In terms of efficient systems in buildings, our policy for new construction is that it aims to out-perform California’s already strict energy code by 20% or more. For existing buildings, we have a goal of reducing energy consumption by at least 10%. Those are the over-arching policy goals.

“We don’t get down to the specific level of stating what boiler to purchase to meet a particular level of efficiency, for example. Everything we do that goes out to bid includes sustainability language in the RFP. The bid is evaluated on that and other criteria.”

UNIVERSITY PROFILE UNC CAMPUSES

According to Pollock Shea, all campuses in the UNC system are directed to measure their energy and water consumption on a normalized basis, with a baseline from 2002-2003. “Our goal is to achieve a 20% energy savings by 2010 and 30% by 2015. We’re at about a 12% reduction right now on energy and 25% on water, so we’re making progress. We need significant chunks of money to get to those 20 and 30% reduction levels.”

“*Additionally, legislation was passed in 2007 that requires all our new buildings larger than 20,000 square feet to be 30% more energy efficient than ASHRAE 90.1-2004, 20% more water efficient, and to use 50% less outdoor water for irrigation purposes.*”

—Cindy Pollock Shea

Selling to Customers with Sustainable Purchasing Programs

Sustainable purchasing programs will continue developing and become more widely adopted. Distributors can serve customer needs and increase sales by offering products that meet the needs of purchasing programs.

Distributors should consider greening their supply chains to sell to organizations with sustainable purchasing requirements. Like the organizations mentioned in this case study, more boards and end-users are driving organizations to adapt their purchasing habits.

With distributors' excellent relationships with each customer segment and product knowledge, the industry has a competitive advantage over other organizations and industries. Several product categories are helpful for selling to organizations with environmentally preferential purchasing programs.

These product categories include:

- PVC-free wire and cable
- Low-mercury lamps
- Power strips that reduce phantom loads
- Energy-efficient lamps
- Occupancy sensors
- Daylighting controls

As distributors build their reputations, knowledge, and product base in sustainability, opportunities in this market will continue to grow.

PRODUCT CATEGORIES TO HELP DISTRIBUTORS AND CUSTOMERS REDUCE ENVIRONMENTAL IMPACT

- >> Nearly all electrical cable is either sheathed or insulated in PVC or other halogenated plastics such as Teflon. Alternatives exist to PVC for electrical insulation and sheathing, such as halogen free materials, LLDPE (linear low-density polyethylene), and XLP / XLPE (thermoset crosslinked polyethylene).⁷ The [Healthy Building Network](#) provides [a list of PVC-free building materials](#); including electrical cables, conduit, and junction boxes. That list includes several manufacturers of XLP / XLPE electrical cables, such as General Cable, Cerrwire, and Southwire.
- >> Low-mercury lamps are a common requirement of sustainable purchasing programs. They can also help organizations achieve a LEED credit. The [LEED for Existing Buildings Operations and Maintenance](#) rating system establishes an upper limit of 90 picograms per lumen-hour for average mercury content of a facility's fluorescent lamps, with a recommended level of 70 picograms per lumen-hour.⁸
- >> Phantom load or plug load is the electricity used by a device when it is turned off. The [Isole Plug Load Control](#) (manufactured by WattStopper/Legrand) and [Smart Strip](#) are power strips that help reduce phantom loads.
- >> LEDs, T5s, and new generation 25 watt T8s are all lamps commonly used in energy-efficient lighting retrofits or new installations. Occupancy sensors and daylighting controls are also experiencing increasing demand due to their energy saving potential.

Endnotes

- ¹ <http://www.epa.gov/opptintr/epp/pubs/about/about.htm> accessed March 8, 2009.
- ² Sustainability Purchasing Network, “Guide to the Business Case & Benefits of Sustainability Purchasing”, March 2007.
- ³ Sustainability Purchasing Network. Op. Cit.
- ⁴ Liddel, B. “Environmentally Preferable Purchasing (EPP) Programs and Strategies: Integrating Environmental and Social Factors into Procurement Practices.” Pacific Northwest Pollution Prevention Resource Center, 2003.
- ⁵ Connie Kuranko, personal interview, January 29, 2009.
- ⁶ Rachael Baker, personal interview, February 5, 2009.
- ⁷ <http://www.healthybuilding.net/pvc/facts.html> accessed March 4, 2009.
- ⁸ <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=221> accessed 3/2/2009

Copyright © 2009 NAED Education & Research Foundation, Inc. All rights reserved.

This case study has been made possible through the generosity of the electrical distributor and manufacturer members of the NAED Foundation’s Channel Advantage Partnership. No part of this report may be reproduced or copied in any form or by any means—graphics, electronic or mechanical, including photocopying, taping, or information and retrieval systems—without written permission from the NAED Education & Research Foundation, Inc.

The findings, opinions, conclusions and recommendations provided herein are based on independent research, commissioned and funded by the NAED Education & Research Foundation, Inc. Information in this report should not be regarded as an endorsement or opinion of the Foundation or its parent organization, National Association of Electrical Distributors, Inc.

