ELECTRIC UTILITY INDUSTRY
SUSTAINABLE SUPPLY CHAIN ALLIANCE

Voluntary Environmental Standards

(Environmental Best Practices & Metrics)

Approved April 2009

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Introduction: Electric Utility Supply Chain Environmental Best Practices

- The best practices describe what Alliance members and their suppliers can aspire to as representative of environmental excellence in the electric utility industry supply chain
  - Consistent with the environmental performance areas identified by the U.S. EPA (Green Supplier Network) and the Global Reporting Initiative (GRI) Performance Indicators
- The best practices will be used to develop a set of environmental questions and evaluation criteria that individual utilities may integrate into their existing supply chain and procurement processes, including:
  - Requests for proposals
  - Contract terms and conditions
  - Supplier bid evaluations
  - Utility business and performance goals
- Electric utilities may incorporate these best practices in their internal supply chain operations, at their discretion

Introduction: Electric Utility Supply Chain Environmental Metrics

- Metrics align with its best practices to help participants in the electric utility industry improve supply chain environmental performance in the following categories:
  - **Supplier Scorecard Measures** can be used by an electric utility to measure the environmental performance of its suppliers' operations, at a company or division level using data collected from RFPs, supplier meetings and the Alliance survey
  - **Utility Supply Chain Metrics** can be used by a utility company's supply chain to measure the environmental performance of its own procurement operation and the aggregate environmental performance of its suppliers' operations
  - **Alliance Metrics** can be used to track the Alliance's progress towards its goals and the aggregate environmental performance of its suppliers through the annual alliance survey

- Final suppler metrics will be incorporated into an annual supplier survey administered by the Alliance to establish a baseline of environmental performance

- Applicable metrics be measured as absolute and/or intensity (e.g. energy consumption, GHG emissions)

- Electric Utilities may draw from the list of supplier metrics and select those that best align with their respective business strategies, and integrate them into their existing supplier performance management processes, including:
  - Supplier scorecard
  - Supplier reward and recognition

- Electric utilities that decide to adopt the standards, phase in the metrics to allow suppliers time to acclimate to any new requirements (timeline will be defined by each utility)

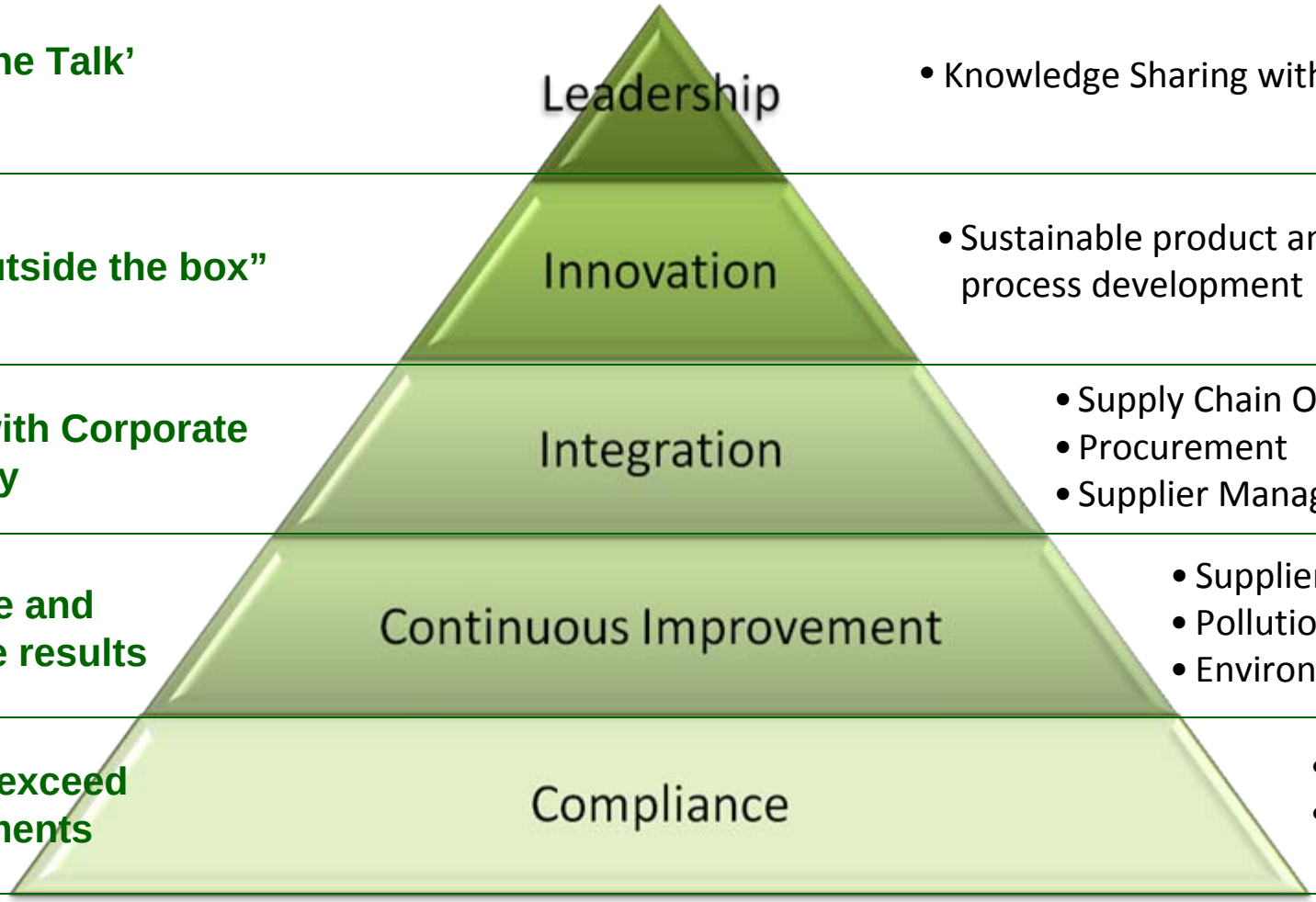
- Metrics for Alliance member utility companies, beyond the supply chain, are the responsibility of the individual utilities and are out of scope for this work effort

Environmental Impact Areas

The Alliance will focus its work in the following Environmental Impact Areas, consistent with the EPA (Green Supplier Network) and GRI Performance Indicators, with the exception of biodiversity which may be addressed in the future, but is out of scope for the phase I implementation.

ENVIRONMENTAL IMPACT AREAS	ALLIANCE	EPA (GSN Program)	GRI
Policy & Environmental Management (includes compliance)	✓	✗	✓
Energy Consumption and Conservation	✓	✓	✓
Air Emissions (includes GHG air and transportation emissions)	✓	✓	✓
Water Use (conservation and pollution)	✓	✓	✓
Waste and Materials Management (includes non-hazardous waste)	✓	✓	✓
Hazardous Waste Reduction	✓	✓	✓
Toxic Chemical Reduction	✓	✓	✓
Biodiversity	✗	✗	✓

Sustainable Supply Chain Framework



'Walk the Talk'

- Knowledge Sharing with Stakeholders

Get "outside the box"

- Sustainable product and process development

Align with Corporate Strategy

- Supply Chain Operations
- Procurement
- Supplier Management

Measure and improve results

- Supplier engagement
- Pollution prevention
- Environmental Mgmt. Systems

Meet or exceed requirements

- "Price of entry"
- A given

ELECTRIC UTILITY INDUSTRY
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Voluntary Standards: Compliance

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
A demonstrated track record of compliance with environmental laws and regulations	# of notices of violations, permit non-compliance, reportable spills and significant monetary fines/penalties	% of suppliers with violations, permit non-compliance, reportable spills and significant fines/penalties	
	Supplier measures and trends environmental compliance performance? (Y/N)	% of suppliers that measure and trend environmental compliance performance (e.g. notices of violation, permit non-compliance, reportable spills and monetary finds/penalties)	% of suppliers that measure and trend environmental compliance performance (e.g. notices of violation, permit non-compliance, reportable spills and monetary finds/penalties)
	Supplier reports compliance performance to senior mgmt/board of directors (Y/N)	% of suppliers that report compliance performance to senior mgmt/board of directors (Y/N)	% of suppliers that report compliance performance to senior mgmt/board of directors (Y/N)
	Supplier publicly reports compliance performance (Y/N)	% of suppliers that publicly report compliance performance	% of suppliers that publicly report compliance performance
	Supplier is required to report emissions under the Toxic Release Inventory (Y/N)	% of suppliers required to report emissions under the Toxic Release Inventory	% of suppliers required to report emissions under the Toxic Release Inventory

Voluntary Standards: Continuous Improvement

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Commit to continuous improvement assessments and implementation plans to address gaps (e.g. EMS, GSN Review, ISO14001 certification or any other quality assessment/certification$_{1}$)	Supplier has an EMS in place? (Y/N)	% of suppliers with EMS	% of suppliers with EMS
	Supplier EMS is certified? (Y/N)	% of suppliers with certified EMS	% of EMS suppliers with certified EMS
Commit to identifying and implementing programs/products/best practices/designations and certifications to reduce the environmental impacts of products/services (e.g. Energy Star, EPEAT, FSC, Green-e, Greenguard, GreenSeal, LEED, RoHS, SmartWay, WasteWise, WEEE$_{1}$)	Identify specific 3rd party programs/products/best practices/designations and certifications	% of suppliers with 3rd party programs/products/best practices/designations and certifications	% of suppliers with 3rd party programs/products/best practices/designations and certifications

Voluntary Standards: Continuous Improvement (Cont'd)

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Reduce environmental impacts in applicable areas that may include: – GHG Emissions (including transportation fuel consumption) – Energy Consumption – Water Use & Quality – Waste and Materials Management – Hazardous waste – Non hazardous waste – Use of toxic materials	**For applicable environmental impact area(s):**		
	Measures and trends performance (Y/N)	% of suppliers that measure and trend performance	% of suppliers that measure and trend performance
	Has a voluntary program to reduce impact(s) (Y/N)	% of suppliers with voluntary programs in place to reduce impact(s)	% of suppliers with voluntary program in place to reduce impact(s)
	Has established voluntary commitment to reduce impact(s) (Y/N)	% of suppliers with voluntary commitments to reduce impacts	% of suppliers with voluntary commitments to reduce impacts
	Reports performance to senior mgmt/board of directors (Y/N)	% of suppliers that report performance to senior mgmt/board of directors (Y/N)	% of suppliers that report performance to senior mgmt/board of directors (Y/N)
	Publicly discloses impact progress/performance (Y/N)	% of suppliers that publicly disclose impact(s)	% of suppliers that publicly disclose impact(s)
	Obtains 3rd party verification/validation of impact results (Y/N)	% of suppliers with 3rd party verification/validation of impact results	% of suppliers with 3rd party verification/validation of impact results
	Demonstrates reduction year over year (Amount or %)	% of suppliers demonstrating reductions year over year	% of suppliers demonstrating reductions

Voluntary Standards: Continuous Improvement (Cont'd)

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Integrate eco-efficiency principles into manufacturing and operations to improve environmental performance (e.g. reduction in material used, increase recyclability, reduction in packaging materials use of recycled content, use of renewable resources, greater durability of goods)	% renewable energy used as a % of total energy consumption	% of suppliers demonstrating increase in renewable energy	% of suppliers demonstrating increase in renewable energy
	% of water reused/recycled	% of suppliers demonstrating increase in water reuse/recycling	% of suppliers demonstrating increase in water reuse/recycling
	% of hazardous waste stream recycled in accordance with applicable regulations	% of hazardous waste stream recycled in accordance with applicable regulations across suppliers	% of hazardous waste stream recycled in accordance with applicable regulations across suppliers
	% of universal waste stream recycled	% of universal waste stream recycled across suppliers	% of universal waste stream recycled across suppliers
	% of municipal waste stream recycled	% of municipal waste stream recycled across suppliers	% of municipal waste stream recycled across suppliers

Voluntary Standards: Continuous Improvement (Cont'd)

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Work toward electronic transactions/paperless supply chain through proposal, contracting, invoicing and payment	Supplier produces electronic invoices (Y/N)	% of suppliers that issue invoices electronically	
	Supplier accepts electronic payments (Y/N)	% of electronic supplier payments	

Voluntary Standards: Integrate Best Practices

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Monitor and publicly report key environmental improvements such as those articulated in the GRI Sustainability Reporting Guideline Indicators, including GHG emissions (e.g. company website, annual report, environmental/sustainability report)	Supplier publicly reports environmental performance (Y/N)	% of suppliers that publicly report environmental performance	% of suppliers that publicly report environmental performance
		Utility publicly reports environmental performance (Y/N)	% of Alliance members that publicly report environmental performance
Work with external stakeholders to improve supply chain environmental performance	Supplier responds to Alliance survey (Y/N)	% supplier response to Alliance survey	% supplier response to Alliance survey

Voluntary Standards: Integrate Best Practices (Cont'd)

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Integrate environmental considerations in business operations practices to sustain higher levels of environmental performance (e.g. RFPs, sourcing decisions, business plans, procedures, supplier/employee performance management/development and reward and recognition)	Supplier has an environmental education program for employees, suppliers, customers? (Y/N)	% of suppliers with environmental education programs for employees, suppliers, customers	% of suppliers with environmental education programs for employees, suppliers, customers
		Utility has integrated each of the best practices into its procurement? (Y/N)	% of members that have integrated each of the best practices into their procurement
		Utility incorporates environmental metrics (beyond compliance) in its supplier performance management process (Y/N)	% of members that have incorporated supplier environmental performance metrics (beyond compliance)
		% of utility procurement sourced using environmental criteria	
		% of utility dollars spent on 'green' products & services/total spend*	

* As defined by each individual utility

Voluntary Standards: Innovation

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Proactively work to identify environmental improvement opportunities in operations/processes and/or product specifications/design (e.g. lifecycle analysis, design for the environment, product sustainability)	Supplier incorporates sustainability into commodity design and/or process/logistics improvement (Y/N)	% of suppliers integrating sustainability into commodity design and/or process/logistics improvement	% of suppliers integrating sustainability into commodity design and/or process/logistics improvement
Recognize and reward employee and supplier innovation for environmental improvement recommendations and for creating more sustainable products/materials	Supplier has established an environmental reward program for its suppliers (Y/N)	% of suppliers with an established supplier environmental reward programs	% of suppliers with established supplier environmental reward programs
	Supplier has established employee environmental reward program (Y/N)	% of suppliers with an established employee environmental reward programs	% of suppliers that have established employee environmental reward programs
		Utility has established a supplier environmental award program (Y/N)	% of Alliance members that have established a Supplier Environmental Award program
		Utility has established an employee environmental award program (Y/N)	% of Alliance members that have established employee environmental award program

Voluntary Standards: Leadership

Best Practice	Measure/Metric		
	Supplier Scorecard Measures	Utility Supply Chain Metrics	Alliance Metrics
Engage (tier 1 & tier 2) suppliers on their environmental performance and impacts of climate change on their business, including identification of resources for assistance (e.g. EPA programs, energy audits, Alliance Voluntary Standards, tools)	Supplier engages with own suppliers on their environmental performance (Y/N)		
	# of suppliers sponsored in 3rd party reviews (e.g. GSN, energy audits)	# of suppliers sponsored in 3rd party reviews (e.g. GSN, energy audits)	# of suppliers sponsored by alliance in 3rd party reviews
		Utility is a GSN champion? (Y/N)	# Alliance members who are GSN Champions
		Total ($ and environmental impact) opportunities identified	Total ($ and environmental impact) opportunities identified
			# of Alliance category working teams completed as a percentage of commodity categories identified
			# of stakeholders participating on commodity teams
Share learning and best practices with interested stakeholders (e.g. website, information workshops, newsletters, presentations, feedback discussions etc.)	Established process for sharing learning and best practices with interested stakeholders (Y/N)	% of suppliers with established processes to share learning and best practices with stakeholders	% of suppliers with established processes to share learning and best practices with stakeholders
		Utility has established process for sharing learning & best practices? (Y/N)	Established process for sharing Alliance learning and best practices (Y/N)

Terms & Definitions

- **Eco-Efficiency:** the term was coined by the World Business Council for Sustainable Development (WBCSD) in its 1992 publication "Changing Course". It is based on the concept of creating more goods and services while using fewer resources and creating less waste and pollution.

  According to the WBCSD definition, eco-efficiency is achieved through the delivery of "competitively priced goods and services that satisfy human needs and bring quality of life while progressively reducing environmental impacts of goods and resource intensity throughout the entire life-cycle to a level at least in line with the Earth's estimated carrying capacity."

  This concept describes a vision for the production of economically valuable goods and services while reducing the ecological impacts of production. In other words eco-efficiency means producing more with less.

  According to the WBCSD, critical aspects of eco-efficiency are:

  - A reduction in the material intensity of goods or services;
  - A reduction in the energy intensity of goods or services;
  - Reduced dispersion of toxic materials;
  - Improved recyclability;
  - Maximum use of renewable resources;
  - Greater durability of products;
  - Increased service intensity of goods and services.

  The reduction in ecological impacts translates into an increase in resource productivity, which in turn can create a competitive advantage.

Terms & Definitions (Cont'd)

- **Energy Star:** http://www.energystar.gov A joint energy efficiency program of the US EPA and the US Department of Energy. Energy Star is a voluntary labeling program designed to identify and promote energy-efficient products and buildings to reduce GHG emissions. The label is now on over 50 product categories, including major appliances, office equipment, lighting, and home electronics. The EPA has also extended the label to cover new homes and commercial/industrial buildings.
- **EPEAT**: http://www.epeat.net A program of the Green Electronics Council to help purchasers evaluate and select desktop computers, notebooks and monitors based on 51 environmental attributes. To qualify for EPEAT registration at the bronze level, a product must confirm to all 23 required criteria. Compliance with all required and 50% of the optional earns a product the silver level and gold is achieved when all required and 75% of the optional criteria are met.
- **Forest Stewardship Council (FSC):** http://www.fscus.org Single level of certification. FSC sets forth principles, criteria and standards that represent the world's strongest system for guiding forest management toward sustainable outcomes. FSC certifications are applicable to wood products, paper and printing.
- **Green-e**: http://www.green-e.org Single level of certification through multiple programs, including Green-e Energy, Green-e Climate and Green-e Marketplace. Green-e is the nation's leading independent consumer protection program for the sale of renewable energy and GHG reductions in the retail market. Green-e offers certification and verification of renewable energy and GHG mitigation products.

Terms & Definitions (Cont'd)

- **Greenguard:** http://www.greenguard.org The mission of Greenguard Environmental Institute (GEI) is to improve public health and quality of life through programs that improve indoor air through three programs: ***Greenguard Indoor Air Quality,*** product certification program for low emitting interior building materials, furnishings and finish systems; ***Greenguard for Children and Schools,*** similar to Indoor Air Quality specifically for use in educational, office and other sensitive environments; and ***Greenguard for Building Construction,*** building certification program for newly constructed multifamily and commercial properties that follow best practices guidelines for preventing mold during the design, construction and ongoing operations.
- **Green Seal:** http://greenseal.org Single level of certification. Provides science-based environmental certification standards for products. Uses lifecycle approach, evaluating a product or service beginning with material extraction through manufacturing, use and recycling/disposal. Products become certified after rigorous testing and evaluation, including on site plant visits. Certified products range from household and industrial cleaners, office products and communications, food preparation and packaging, transportation, paints/coatings and windows and doors.
- **Green Suppliers Network (GSN):** https://www.greensuppliers.gove/gsn/home/gsn Joint program sponsored by US EPA and Department of Commerce to offer low cost technical reviews that identify strategies for improving process lines and using materials more efficiently. The lean and clean approach targets and eliminates the root causes of waste (reducing environmental impacts and costs)

Terms & Definitions (Cont'd)

- **ISO14001:** http://www.iso.org Single level of certification. Provides the requirements for an Environmental Management System (EMS). The ISO 14001 address specific environmental aspects including: labeling, performance evaluation, lifecycle analysis and communicating and auditing.
- **Leadership in Energy and Environmental Design (LEED):** http://www.usgbc.org Multiple levels of certification (certified, silver, gold and platinum) developed by the US Green Building Council. LEED is a third party certification program and the nationally accepted benchmark for the design, construction and operation of high performance green buildings. LEED promotes a whole building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.
- **RoHS (Restriction of Hazardous Substances Directive):** http://www.rohsguide.com This is not a certification program per se, however all applicable products introduced in the EU market after July 1, 2006 must pass RoHS compliance which restricts the use of six hazardous materials in the manufacture of various electronics and electrical equipment including: lead, mercury, adamium, hexavalent chromium, polybrominated biphenyls (PBB) and plybrominated diphenyl ether (PBDE).
- **SmartWay Transportation Partnership:** http://www.epa.gov/smartway A series of programs launched by the EPA in 2004 to identify products and services that reduce transportation-related emissions and costs.

Terms & Definitions (Cont'd)

- **Waste Wise**: http://www.epa.gov/epawaste/partnerships/wastewise/index.htm WasteWise is an EPA program that helps its partners meet goals to reduce and recycle municipal solid waste and selected industrial wastes and costs associated with disposal of waste.

- **Waste Electrical and Electronic Equipment Directive (WEEE):** http://www.weeeregistration.com This is not a certification per se, although all applicable products entering the EU market after August 13, 2005 must confirm to this directive, whose purpose is to prevent waste of electronics and electrical equipment (WEEE) and the reuse, recycling and other forms of recovery of such wastes to reduce the amount disposed of. The directive also seeks to improve the environmental performance of all operators involved in the lifecycle of electrical and electronic equipment (e.g. producers, distributors and consumers and in particular those operators directly involved in the treatment of waste of electrical and electronic equipment.