

DEPARTMENT OF ENERGY
PROPOSED POLLUTION PREVENTION and ENVIRONMENTAL STEWARDSHIP
STRATEGIC GOALS

BACKGROUND

2006 and Beyond

- *EMS** centered (complementary departmental goals in support of site-specific and self-selecting EMS performance objectives and measurable targets)
- *DOE O 450.1 compliant* (consistent with Order/CRD):
 - pollution prevention in EMS; reduce waste and releases to the environment (air/water/soil/biota) through source reduction, recycling and EPP
- *Results-oriented* (universally accepted performance measures for pollution prevention and sustainable environmental stewardship)
- *Dynamic* (accommodates DOE participation in Federal Electronics Challenge, Green Building Initiative, Green Purchasing Initiative; Federal Priority Chemical Reduction Initiative, etc.)
- *Business sense* (pollution prevention (P2)) is a sound strategy to help avoid pollution control costs, reduce environmental liability, and improve production efficiency and capabilities:
 - P2 pays by eliminating or reducing pollution to begin with, rather than having to store, treat, transport, or otherwise deal with it after it is created *i.e., efficient compliance strategy*;
 - P2 pays by purchasing ‘green’ less toxic and environmentally friendly products, so less time, energy, and money is spent on reporting, storing, and treating pollution *i.e., reduce operational costs, worker exposure, and improve environmental compliance status*).

*An Environmental Management System (EMS) reflects accepted quality management principles based on the “Plan, Do, Check, Act,” model using a standard process to identify goals, implement them, determine progress, and make corrections to ensure continual improvement

U.S. Department of Energy
Washington, D.C.

POLICY

DRAFT
DOE P 450.X

Approved: XX-XX-05

SUBJECT: POLLUTION PREVENTION AND SUSTAINABLE ENVIRONMENTAL STEWARDSHIP STRATEGIC GOALS

I. PURPOSE AND SCOPE

To establish Department of Energy (DOE) goals that advance the pollution prevention and environmental management system provisions of DOE Order 450.1, *Environmental Protection Program*, and Executive Orders 13148, *Greening the Government Through Leadership in Environmental Management and 13101, Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*. The goals supercede the previous pollution prevention leadership goals that expire at the end of Fiscal Year 2005.

Implementation of these goals is required of all DOE elements and contractors subject to DOE Order 450.1 and its Contractor Requirements Document (CRD), or Executive Orders 13148 and 13101.

II. POLICY

It is policy of the Department that pollution prevention and sustainable environmental stewardship (or P2) will be integrated into DOE operations as a good business practice to reduce environmental hazards, protect environmental resources, avoid pollution control costs, and improve operational efficiency and mission sustainability. In furtherance of this policy, the Department hereby establishes five strategic, performance-based P2 goals. These goals and accompanying strategies are to be implemented by DOE sites through the integration of P2 into environmental management systems pursuant to DOE Order 450.1 and its Contractor Requirements Document, and the Greening the Government Executive Orders.

1. Goals, Objectives and Strategies

GOAL	PROTECT THE ENVIRONMENT, AND ENHANCE MISSION ACCOMPLISHMENT THROUGH WASTE PREVENTION
OBJECTIVE	Reduce environmental hazards, protect environmental resources, minimize life-cycle cost and liability of DOE programs, and maximize operational flexibility by eliminating or minimizing the generation of wastes that would otherwise require storage, treatment, disposal, and long-term monitoring and surveillance (i.e., future environmental legacies)
STRATEGIES	<ul style="list-style-type: none">Establish pollution prevention opportunity assessments (PPOAs) of waste generating activities, as objectives and measurable targets in site environmental management systems (EMSs)

	<ul style="list-style-type: none"> • Based on PPOAs, establish objectives and measurable targets in sites EMSs for the prevention, reduction, reuse and recycling of waste streams generated at sites • Identify resources needed to implement this pollution prevention goal and site-specific objectives and targets in site annual budgetary processes • Participate in voluntary environmental partnership programs (e.g., National Waste Minimization Program, Waste Wise, National Environmental Performance Track, etc.) where there is a programmatic benefit from doing so (community outreach, technology transfer, regulatory incentives, etc.)
--	---

GOAL	PROTECT THE ENVIRONMENT, AND ENHANCE MISSION ACCOMPLISHMENT THROUGH <i>REDUCTION OF ENVIRONMENTAL RELEASES</i>
OBJECTIVE	Reduce environmental hazards, protect environmental resources, minimize life-cycle cost and liability of DOE programs, and maximize operational flexibility by eliminating or minimizing use of toxic chemicals and associated hazardous environmental releases that would otherwise require control, treatment, monitoring, and reporting
STRATEGIES	<ul style="list-style-type: none"> • Establish pollution prevention opportunity assessments (PPOAs) of activities using toxic chemicals, as objectives and measurable targets in site environmental management systems (EMSs) • Based on PPOAs, establish objectives and measurable targets in site EMSs for eliminating or minimizing the use of toxic chemicals • Based on PPOAs, establish objectives and measurable targets in site EMSs for reducing releases of toxic chemicals into the environment (air, water, soil, biota) • Identify resources needed to implement this pollution prevention goal and site-specific objectives and targets in site annual budgetary processes • Participate in voluntary environmental partnership programs (e.g., Adopt Your Watershed, Climate Leaders, Green Engineering, National Environmental Performance Track, etc.) where there is a programmatic benefit from doing so (community outreach, technology transfer, regulatory incentives, etc.)

GOAL	PROTECT THE ENVIRONMENT AND ENHANCE MISSION ACCOMPLISHMENT THROUGH <i>ENVIRONMENTALLY PREFERABLE PURCHASING</i>
OBJECTIVE	Reduce environmental hazards, conserve environmental resources, minimize life-cycle cost and liability of DOE programs, and maximize operational flexibility through the procurement of recycled-content, bio-based and other environmentally preferable products thereby minimizing the economic and environmental impacts of managing toxic by-products and hazardous wastes generated in the conduct of site activities
STRATEGIES	<ul style="list-style-type: none"> • Establish environmentally preferable purchasing objectives and measurable targets in site environmental management systems (EMSs) • Green Purchasing <ul style="list-style-type: none"> – Specify environmentally preferable products* in the acquisition of site supplies – Procure Environmental Protection Agency-designated recycled-content products – Procure Department of Agriculture-designated bio-based content products – Procure EPA Significant New Alternatives Policy (SNAP) Program acceptable substitutes for ozone-depleting substances – Procure cleaning products meeting GreenSeal specifications (www.greenseal.org) and/or EPA-designated green cleaning products (www.epa.gov/opptintr/epp/cleaners/select) • Federal Electronics Challenge <ul style="list-style-type: none"> – Specify environmental attributes (e.g., end of life-cycle recovery, reduced toxic metal-content, increased recycled component-content, or <i>Eco-Label</i> certification) in the procurement of computers, monitors, and peripheral electronic equipment <ul style="list-style-type: none"> • Utilize the FEC Electronic Procurement Environmental Assessment Tool (EPEAT) in development of environmental attribute specifications, or the identification of <i>Eco-Label</i> vendors and suppliers. (www.epeat.net.) • Operate a vehicle fleet that is the most environmentally preferable possible while meeting performance, cost and regulatory requirements.

	<ul style="list-style-type: none"> – Utilize API-rated re-refined oil, retread truck tires, antifreeze/engine coolant recyclers, water recycling/reclamation vehicle wash facilities, and biobased lubricants, fuels and degreasers/cleaners. – Utilize alternate fuel (hybrid, fuel efficient, clean air) vehicles <ul style="list-style-type: none"> • Identify resources needed to implement this pollution prevention goal and site-specific objectives and targets in site annual budgetary processes <p>*Products that have a lesser or reduced effect on the environment when compared with competing products that serve the same purpose, including materials that result in no waste, less waste or less toxic waste across the entire life-cycle.</p>
--	---

GOAL	PROTECT THE ENVIRONMENT AND ENHANCE MISSION ACCOMPLISHMENT THROUGH INCORPORATION OF ENVIRONMENTAL STEWARDSHIP IN PROGRAM PLANNING AND OPERATIONAL DESIGN
OBJECTIVE	Reduce environmental hazards, conserve environmental and energy resources, minimize life-cycle cost and liability of DOE programs, and maximize operational flexibility by incorporating sustainable environmental stewardship in the design and construction of capital assets thereby minimizing the economic and environmental impact of site construction, operation, and closure.
STRATEGIES	<ul style="list-style-type: none"> • Establish sustainable environmental stewardship objectives and measurable targets in site environmental management systems (EMSs) • Green Building <ul style="list-style-type: none"> – Apply sustainable building design criterion when planning and constructing new facilities or modifying existing facilities to optimize life-cycle costs, reduce pollution, minimize energy consumption, conserve water, and enhance indoor air quality, worker safety and productivity <ul style="list-style-type: none"> • Utilize FEMP New Building Design Project Assistance • Utilize FEMP New Construction Project Assistance • Utilize DEMP Retrofit Project Assistance • Utilize DEMP Energy Management Model Program Assistance • Utilize NIST Building for Environmental and Economic Sustainability Assistance (tool for

	<p style="text-align: center;">selecting cost-effective, environmentally preferable building construction products)</p> <ul style="list-style-type: none">- Include sustainable design and development criteria in built-to-lease solicitations- Include a preference for buildings meeting the Leadership in Energy and Environmental Design (LEED) Green Building Rating System in selection criteria for acquiring leased buildings.- Retire inefficient equipment on an accelerated basis where replacement results in lower life-cycle costs (reduced energy and water consumption, and waste generation) <ul style="list-style-type: none">• Green Chemistry<ul style="list-style-type: none">- Participate in the EPA/DOE sponsored Laboratories for the 21st Century (Labs21) voluntary program dedicated to improving the environmental performance and stewardship of U.S. laboratories through the design of chemical products and analytical processes that reduce or eliminate the use and/or generation of hazardous substances.- Establish pollution prevention opportunity assessments (PPOAs) of laboratory activities, as objectives and measurable targets in site environmental management systems (EMSs)- Based on PPOAs, establish objectives and measurable targets in site EMSs for:<ul style="list-style-type: none">• development and utilization of more environmentally benign solvents and solvent-less systems that reduce or eliminate the use of toxic or hazardous solvents;• design of analytical products and processes that reduce or eliminate the use and/or generation of hazardous substances;• Application of Lab21 Environmental Performance Criteria in the operation of laboratory facilities.• Green Landscaping<ul style="list-style-type: none">- Implement cost-effective, sustainable landscape design and management practices to reduce adverse impact to the natural environment and native ecological systems<ul style="list-style-type: none">• Utilize EPA GreenScapes environmentally beneficial landscaping methods to reduce waste and energy usage, conserve water, and reduce greenhouse gas emissions. www.epa.gov/greenscapes
--	---

	<ul style="list-style-type: none"> Identify resources needed to implement this sustainable environmental stewardship goal and site-specific objectives and targets in site annual budgetary processes
--	--

GOAL	PROTECT THE ENVIRONMENT AND ENHANCE MISSION ACCOMPLISHMENT THROUGH <i>RECYCLING OF SOLID WASTE</i>
OBJECTIVE	Protect environmental resources, minimize life-cycle cost of DOE programs, and maximize operational flexibility by diverting materials suitable for reuse and recycling from sanitary landfills thereby minimizing the economic and environmental impacts of waste disposal, and long-term monitoring and surveillance
STRATEGIES	<ul style="list-style-type: none"> Establish solid waste recycling objectives and measurable targets in site environmental management systems (EMSs) Recycle office, cardboard, aluminum, plastics, and glass. Recycle spent oil, hydraulic fluid, lubricants, and solvents Recycle construction and demolition debris <ul style="list-style-type: none"> Reuse demolition rubble (concrete, brick, and other masonry) on-site by crushing the material to stone for grading, laying utilities, and building roads, driveways and parking areas. Pulverize and reuse gravel asphalt and sub-base. Utilize the General Services Administration Construction Waste Management Database to identify recyclers of 15 commonly-recycled construction and demolition debris such as concrete, asphalt, masonry, metal, plastic, and wood (cwm.wbdg.org) Collect spent toner cartridges and batteries for remanufacturing. Federal Electronics Challenge - Recycle surplus, excess computers, monitors and peripheral electronics <ul style="list-style-type: none"> Extend life-cycle of computers through software upgrades and continued use, and Utilize Environmental Protection Agency Recycling Electronics and Asset Disposition (READ) Services Government Wide Acquisition Contract as an environmentally compliant means for disposition of obsolete electronics (http://www.epa.gov/oamhpod1/admin_placement/0300115/index.htm), or Utilize Department of Justice UNICOR Electronic Recycling Program as an means of donating surplus

	<p>electronics to schools and educational nonprofit organizations for reuse, and as an environmentally compliant means for disposition of obsolete electronics, or</p> <ul style="list-style-type: none">– Utilize General Services Administration Federal Supply Service Multiple Award Schedule 899, environmental services for recycling of electronic equipment as an environmentally compliant means for disposition of obsolete electronics, or– Utilize recyclers that are members, in good standing, of one or more of the following professional associations:<ul style="list-style-type: none">○ International Association of Electronic Recyclers○ Institute of Scrap Recycling Industries○ National Recycling Coalition○ ... (more to come) <ul style="list-style-type: none">• Recycle surplus commodities and by-products<ul style="list-style-type: none">– Utilize material exchange programs such as Recycler's World Network (www.recycle.net) and the DOE Materials Exchange Network (wastenot.er.doe.gov) to transfer unwanted materials to alternate users• Identify resources needed to implement this pollution prevention goal and site-specific objectives and targets in site annual budgetary processes
--	---

2. Performance Measures

Measure progress toward implementing these pollution prevention goals and meeting related EMS objectives and targets, and make such information available annually to the Agency Environmental Executive.