

# Waste and Resource Recovery Committee Newsletter

Vol. 12, No. 1

January 2012

## UNIVERSAL WASTE REGULATIONS ARE ANYTHING BUT

**Mike McLaughlin**

Those who read Dave Scriven-Young's article in the last Waste and Resource Recovery Newsletter ("Administrative Law Judge Rules That Illinois's State Universal Waste Rule Is Not Enforceable by the USEPA and Not a Defense in an Enforcement Action") may have had a sinking feeling. Is my state one of those where EPA has not authorized some part of the state's universal waste program? Could this happen here?

Twenty-nine states and the District of Columbia have adopted some form of universal waste rules that have not been fully authorized by U.S. Environmental Protection Agency (EPA): Alabama, Arkansas, California, Delaware, District of Columbia, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Missouri, Mississippi, Nebraska, Nevada, New Jersey, North Carolina, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wyoming.

However, there is no easy way to figure out which specific universal waste regulations adopted by a state have not been authorized by EPA. EPA has a state authorization tracking system web site (<http://www.epa.gov/waste/laws-regs/state/stats/stats.htm>) that provides links to *Federal Register* notices authorizing revisions to state hazardous waste programs, but reading those *Federal Register* notices

provides little helpful information regarding what specific elements of the rules adopted by a state are not authorized by EPA.

For that matter, it is not easy to determine what specific regulations *are* authorized from the tables appended to the *Federal Register* notices. The tables list specific state regulations that correspond to the different review checklists used by EPA to evaluate the state regulatory program, but this a broad brush indeed. Completed checklists for different states are not published on the Web site. This is unfortunate.

Blank copies of the review checklists are available (<http://www.epa.gov/osw/laws-regs/state/revision/program.htm>). For each review element, the checklist provides a space for the reviewer to indicate whether the corresponding state program provision is equivalent to, or less stringent, more stringent, or broader in scope than the federal program provision. There are eight different review checklists (142A, 142B, 142C, 142D, 142E, 176, 181, and 209) for evaluation of state universal waste programs. These details—particularly state regulations that EPA regards as either more stringent or broader in scope than the corresponding federal regulations—can be critical when EPA institutes enforcement action.

The universal waste case Dave Scriven-Young described (*In the Matter of Mercury Vapor Processing Technologies, Inc.*, Docket No. RCRA-05-2010-0015) was a situation where the defendant claimed it was compliant with Illinois rules for universal

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Mike McLaughlin, Editor**

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waste handlers when it reduced the volume of lamps by breaking them. EPA disagreed, but also asserted that it did not matter—that it could enforce the general rules prohibiting hazardous waste treatment without a permit without even considering the Illinois universal waste regulations that EPA has never authorized.

Subsequently, the defendant filed a motion to dismiss the complaint with prejudice “for lack of fair notice and convoluted regulations.” Alas, this is not the first time someone asserted that the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations are convoluted—almost everyone feels that way the first time they read them. EPA moved to strike, and Judge Gunning decided that a ruling on the motion should be held in abeyance until after the evidentiary hearing July 25–29, 2011. The parties have completed their post-hearing submissions, and the case awaits the judge’s decision.

The biggest difference between state universal waste regulatory programs and the federal rules has to do with whether lamps can be reduced in volume without a permit, and if so by whom and how. For example, Virginia’s universal waste regulations permit mercury-containing lamps to be crushed on the site of generation provided that appropriate equipment is used. Those who collect lamps generated elsewhere

(i.e., universal waste handlers) must comply with more rigorous equipment requirements. But neither requires a permit (9VAC20-60-273 B. 3.b and c). The Virginia universal waste lamp rule has not been authorized by EPA, so a person properly using the required equipment to crush universal waste lamps under Virginia law could theoretically be subject to enforcement of the general hazardous waste treatment regulations by EPA.

The Association of Lighting and Mercury Recyclers has published a Web site that compares state program stringency in terms of whether the state recognizes conditionally exempt small quantity generators (CESQG), where CESQG waste can be taken, whether lamps can be declared nonhazardous, and other provisions affecting waste lamp management (<http://www.almr.org/stringency3.html>). However, the table is not accurate in every instance. For example, it says Missouri has no CESQG exemption, which is not the case: <http://dnr.mo.gov/pubs/pub128.pdf>.

Universal waste regulations vary considerably from state to state. The added threat of federal enforcement of general hazardous waste requirements in lieu of state universal waste regulations not authorized by EPA complicates compliance. Such complexity runs counter to the purpose of universal waste regulations in the first place, which is to make it easy to collect and recycle these common materials.



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## **SUPREME COURT UPDATE: U.S. V. SOUTHERN UNION CO.**

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### **Mike McLaughlin**

Another recent case, *United States v. Southern Union Company*, 630 F.3d 17 (1st Cir. 2010), *cert. granted*, Nov. 28, 2011, involved federal enforcement of state hazardous waste regulations. Southern Union purchased a gas company in Rhode Island that collected old mercury-containing regulators from gas meters in its service area. The regulators were stored in a building owned by the utility, as were various containers of liquid mercury. The total volume of mercury involved was about 1.25 gallons, or about 140 pounds (64 kilograms).

Vandals broke into the building, spilled the mercury, and took some of the mercury to their apartment complex and spilled it there. When the gas company discovered the spill, they reported it to the state environmental agency and commenced a cleanup that ultimately cost about \$6 million. Then the U.S. attorney sought a felony indictment against the utility alleging, among other counts, deliberately storing hazardous wastes without a permit.

Those familiar with the federal hazardous waste regulations might point out that small quantity generators—those who generate up to 100 kilograms of nonacute hazardous waste in any calendar month—do not need a permit to store hazardous wastes so long as they do not accumulate as much as 1,000 kilograms of hazardous waste. Even if all 64 kilograms of mercury at the site had been discarded in a single calendar month, the gas company should not have needed a hazardous waste permit under the federal regulations.

Rhode Island does not recognize the federal 100 kilogram threshold for becoming a hazardous waste generator subject to permit requirements. State rules are explicit on this point (Rule 3.00 definition for “Hazardous Waste:” “the small quantity generator provisions of 40 CFR 261.5 do not apply in Rhode Island. . .”). The Rhode Island rules apparently mean that storage of even a single molecule of hazardous waste for more than 90 days requires a permit. This despite the fact that the Rhode Island Department of

Environmental Management (DEM) was instructed by the general assembly that the state’s hazardous waste management rules and regulations “shall, to the maximum extent practical, be compatible with” the rules and regulations promulgated by EPA under the Resource Conservation and Recovery Act (RCRA) (R.I. Gen. Laws § 23-19.1-6).

Southern Union argued that the liquid mercury stored under lock and key was not a waste under Rhode Island or federal regulations—because the mercury was a commercial chemical product being held for eventual reclamation, it could not be a solid waste (40 C.F.R. 261.2(c)(3)) and so could not be a hazardous waste. It argued that Rhode Island’s regulation of those who store even a molecule of hazardous waste for more than 90 days is broader in scope as opposed to merely more stringent than federal regulations, and as such could not be federally enforceable. It cited various apparently dispositive EPA documents from the RCRA online database (<http://www.epa.gov/epawaste/inforesources/online/index.htm>) in support of its arguments, to no avail at trial.

A jury convicted Southern Union of a single count of storing hazardous waste without a permit. The judge determined that the maximum penalty faced for this crime was \$50,000 for each of the 762 days that the indictment charged hazardous wastes were stored without a permit, or a total maximum penalty of just over \$38 million. The judge then imposed a \$6 million fine and \$12 million community service obligation.

Southern Union appealed, and the First Circuit affirmed. The nuances of when a material being held for recycling becomes a waste and whether application of Rhode Island’s rules to < 100 kilogram/month generators represents a more stringent (thus federally enforceable) or a broader in scope (thus not federally enforceable) regulation as compared with the federal hazardous waste regulatory program were each decided in the government’s favor. The appeals court noted that as a highly regulated natural gas company, it is part of Southern Union’s business to keep abreast of government regulations.


The U.S. Supreme Court granted certiorari to consider whether the amount of the criminal fine was based on

factors not determined by the jury and whether this matters under the Constitution.

It might really get interesting if the Court decides to read the Rhode Island hazardous waste regulations literally. For example, DEM's Hazardous Waste Regulations Rule 5.2A provides that "[a]ny material designated as a hazardous waste stored on site by a generator for a period not to exceed 90 days . . . shall be termed 90 day accumulation. Such accumulated waste shall be excluded from storage permit requirements provided that it is managed in accordance with the provisions of these Rules and Regulations." Why are the words "material designated as a" included in this regulation? Do they serve any purpose unless the generator is the one who must designate the material as hazardous? And if the generator has not designated the material as hazardous waste—because, for example, they do not plan to discard it as a waste at all—has the 90-day accumulation period begun?

Watch this space for updates as the Supreme Court receives briefs on the merits and schedules oral arguments: [http://www.americanbar.org/publications/preview\\_home/11-94.html](http://www.americanbar.org/publications/preview_home/11-94.html).

**Mike McLaughlin** is a senior vice president with the Reston, Virginia, offices of SCS Engineers, a national environmental consulting and contracting firm. He is an attorney, a licensed professional engineer, and a vice chair of the W&RR Committee. Mike may be reached at [mmclaughlin@scsengineers.com](mailto:mmclaughlin@scsengineers.com).



**Trends: Section newsletter now in new electronic format**

*Trends* can be found in a new electronic format at [www.ambar.org/EnvironTrends](http://www.ambar.org/EnvironTrends). Beginning with the November/December 2011 issue, individual articles will be posted in html format and will contain hyperlinks to important cases and other resources cited in the articles.

When a new issue becomes available online, Section members will be sent an e-mail announcement. Open that announcement and the latest issue of *Trends* will be available on your desktop, laptop, tablet, or smart phone.

*Trends* will be made available to Section members exclusively in electronic format. There are plans for continued optimization of the *Trends* electronic format to better serve Section members. The Section is also developing enhanced electronic formats for *Natural Resources & Environment* and *The Year in Review*.

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# A PORTRAIT OF UNINTENDED CONSEQUENCES: BENEFICIAL USE OF COAL ASH AND REGULATORY UNCERTAINTY

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**Steven T. Moon and John Ward**

Due to the uncertainty of proposed coal ash regulations, the recycling industries are experiencing adverse effects that seem to be never ending. In June 2010, the U.S. Environmental Protection Agency (EPA) proposed options for regulating coal ash disposal. One of those options would designate coal ash as “hazardous waste.”

Users of coal ash are increasingly concerned about the potential legal liabilities associated with using a material that could be designated as a “hazardous waste.” Headlines such as “Fly Ash: This Year’s Asbestos?” in insurance publications are adding fuel to the fire.

## History

The 1980 Beville Amendment to the Resource Conservation and Recovery Act (RCRA) instructed EPA to “conduct a detailed and comprehensive study and submit a report” to Congress on the “adverse effects on human health and the environment, if any, of the disposal and utilization” of coal ash. In two reports to Congress (1988 and 1999), EPA recommended that coal ash should not be regulated as a hazardous waste. A 1993 EPA regulatory determination found regulation as a hazardous waste “unwarranted.” A 2000 EPA final regulatory determination concluded coal ash materials “do not warrant regulation [as hazardous waste]” and “the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes.”

Following the failure of the TVA coal ash disposal facility in December 2008, EPA proposed options for regulating coal ash disposal in proposed rules issued in June 2010. One of the options called for regulation under subtitle C of the RCRA, which covers “hazardous waste.” EPA did not claim coal ash qualifies as a “hazardous waste” based on toxicity characteristics. Instead, EPA cited “damage cases”

similar to the TVA accident as justification under the subtitle C regulation.

EPA has announced it will not propose a final coal ash disposal regulation during 2011. It is expected that the agency will not act until after the 2012 presidential election.

Due to this extremely slow and confusing regulatory process, coal ash recyclers have serious concerns and questions about their future. The potential liabilities of using materials which might later be regulated as “hazardous waste” could be disastrous.

## Why Recycle Coal Ash?

There are many good reasons to view coal ash as a resource, rather than a waste. Recycling it conserves natural resources and saves energy. Products made with coal ash often perform better than products made without it. For instance, coal ash makes concrete stronger and more durable. It also reduces the need to manufacture cement, resulting in significant reductions in greenhouse gas emissions.

The U.S. Department of Energy predicts that in 2030 we will actually generate 19 percent more electricity from coal than we did in 2007.

Generating that much electricity produces large volumes of coal ash—solid materials left over from the combustion process. According to the American Coal Ash Association, about 135 million tons of this material were produced in 2009.

Several types of residuals are included in the broad category of “coal ash.” They include:

- Fly ash—ash that exits a combustion chamber in the flue gas and is captured by air pollution control equipment, such as electrostatic precipitators, baghouses, and wet scrubbers.
- Bottom ash—agglomerated ash particles formed in pulverized coal furnaces that fall through open grates to an ash hopper at the bottom of the furnace.
- Boiler slag—a molten ash collected at the base of slag tap and cyclone furnaces that is

quenched with water and shatters into black angular particles having a smooth glassy appearance.

- Flue gas desulfurization (FGD) material—a product of a FGD process typically using a high-calcium sorbent, such as lime or limestone. Sodium-based sorbent and high-calcium coal fly ashes are also used in some FGD systems.

In the decade from 1999 to 2009, the United States successfully recycled 519 million tons of coal ash—some 38 percent of the 1.35 billion tons of coal ash produced. Greenhouse gas emissions were decreased by more than 138 million tons during that period through the use of coal fly ash in concrete products.

In 2009, 41 percent of coal ash was beneficially used—or “recycled”—rather than disposed.

## Who Gets Hurt?

This amazing environmental success is almost entirely the result of small business. The coal ash recycling industry is separate from electric utilities. These coal ash recycling organizations are made up of many different segments:

- Most utilities engage the services of third-party marketers that are responsible for developing customers, providing infrastructure and logistics for delivering ash to users, providing technical support, and managing all business functions related to the sale and use of coal ash. Many of these coal ash marketers are small businesses.
- Additionally, the coal ash recycling industry includes companies that develop and deploy technologies for improving the quality of coal ash in order to ensure it meets industry standards and user specifications. Many innovative coal ash technology developers are small businesses.
- Finally, thousands of companies rely on coal ash as an ingredient in the products they manufacture. In the production of concrete, coal ash is a key ingredient used to improve concrete quality while reducing costs. In other

cases, such as the manufacturing of coal ash bricks or agricultural soil amendments, coal ash is the primary ingredient. (All of these are small businesses created specifically to recycle coal ash.)

In all three categories—marketers, technology providers, and manufacturers—the majority of companies are small businesses with little or no resources to weather prolonged regulatory or legal challenges.

EPA’s extensive public comment process during 2010 showed that those who are actually involved in recycling coal ash—from producers to marketers to specifiers to users—are unanimous in the opinion that a “hazardous” designation for coal ash would be disastrous for beneficial use.

## Stigma

Consumers of coal combustion products are beginning to remove the materials from their specifications because of uncertainty regarding the safety of the material or because of concern over potential legal liability from using it. One example is the Los Angeles Unified School District. The district has prohibited the use of coal fly ash in its concrete “until the EPA confirms fly ash to be a non-hazardous toxic waste.” Another example is H.R. 2273 sponsor Rep. David McKinley himself—who as a civil engineer prior to his election to Congress removed coal fly ash from his concrete specifications because of liability concerns.

These two examples clearly show the stigma of “hazardous waste” and the changes the industry is already experiencing. Once the “hazardous waste” label is used, organizations are not going to use the product regardless of the science behind the product.

Manufacturers of products that compete with recycled coal ash have been fanning the stigma flames by citing the potential EPA “hazardous waste” designation. This has already occurred in markets for blasting grit, brick manufacturing, lightweight aggregate production, and concrete block manufacturing. Commercial liability insurance policies have begun to appear that contain

exclusions for companies using products that contain fly ash.

Supporters of the “hazardous waste” designation say recycling rates will actually increase under a “hazardous waste” designation, citing the experience of a handful of other industrial by-products. The materials cited by EPA include electric arc furnace dust, electroplating wastewater sludge, chat from lead and zinc mining, used oil, spent etchants, and spent solvents. The problem is none of those materials are anything like coal ash. Most of them actually qualify as a hazardous waste based on their toxicity. (Coal ash does not.) Almost all of them are reprocessed prior to recycling. (Coal ash is not.) Most of them get recycled in industrial processes, often by the companies that produced the materials in the first place. (Coal ash is distributed for recycling by thousands of other companies in tens of thousands of public and residential locations all over the country.) Many of them are produced and recycled in very small quantities. (Coal ash recycling is measured in the millions of tons.)

As for the position that higher disposal costs will automatically lead to greater recycling rates, please consider history: in 2000, the recycling rate for coal ash was 30 percent. In 2008, it had increased to 44 percent, resulting in an almost 50 percent increase in less than a decade.

In 2000, the Environmental Protection Agency issued its final regulatory determination that concluded coal ash does *not* warrant regulation as a hazardous waste. That sent a clear signal to producers, marketers, and users of coal ash who began to invest more in the infrastructure necessary to support recycling. In 2002, the Environmental Protection Agency accelerated this effort by creating the Coal Combustion Products Partnership, or C<sup>2</sup>P<sup>2</sup> program, to actively promote recycling as a preferred alternative to disposal.

Unfortunately, by stepping back from its visible support of recycling, EPA has now created far-reaching uncertainty. Due to this, investments in the infrastructure necessary to support recycling have stalled and recycling rates have already begun to drop.

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**John Ward** is president of John Ward, Inc., a marketing and public affairs consultancy focusing on energy issues. John is chairman of the Government Relations Committee of the American Coal Ash Association. He can be reached at [wardo@wardo.com](mailto:wardo@wardo.com).

**Beyond 2012: Meeting the Nation’s Environmental, Energy and Resources Challenges**

Wednesday, January 18, 2012

Live CLE Webinar, 10:30 a.m. – 12:00 p.m. (eastern)

Sponsors: ABA Section of Environmental, Energy, and Resources and the ABA Center for Continuing Legal Education

This program will focus on law and policy challenges the nation is likely to face in mid-2013 in the environmental, energy, and resource areas, and possible approaches to address them. These challenges will exist regardless of who controls the White House and Congress at that time. For that reason, the speakers will concentrate on assisting lawyers and clients in anticipating and responding to critical issues without regard to the outcome of the 2012 election.

Many current controversies and dilemmas seem likely to persist, but the speakers, who have vast experience in their fields, will identify and comment on emerging topics as well. The program will include remarks by each speaker centered on his or her area of expertise, followed by a discussion among the speakers of topics on cross-cutting importance.

**Alexandra Dapolito Dunn (Moderator)**, Executive Director and General Counsel, *Association of Clean Water Administrators*, Washington, DC

**John C. Cruden**, President, *Environmental Law Institute*, Washington, DC

**Suedeen G. Kelly**, Partner, *Patton Boggs LLP*, Washington, DC

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## ZERO WASTE PROJECTS REDUCE COSTS AND LIABILITIES

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**Jim Haried and Anne Munaretto**

A zero waste program is a leading industry practice that focuses an entire enterprise on restructuring and improving product design, production, and distribution processes to prevent initial waste generation. Zero waste processes anticipate that the materials which form a product are reused many times as it is reused or recycled. Zero waste includes end-of-pipe solutions such as reuse, remanufacture, and recycling, but its focus spans across the entire value chain of the enterprise. At its core, a zero waste process mimics the way that resources are reused in nature. In an effort to support the practice, twenty-five states require electronics manufacturers to take back their electronics products, six more states have legislation pending, and California imposes a consumer fee to fund product take-back. This article provides examples of zero waste programs in industry, lists key zero waste principles, and suggests potential zero waste initiatives.

### Zero Waste Examples in Industry

- Sony promotes its goal for a “zero environmental footprint” to reduce to zero the environmental footprint of the life cycles of every Sony product by 2050 ([www.sony.net](http://www.sony.net)). It has established an extended producer responsibility (EPR) for its products, which incorporates the cost of disposal or recovery into the cost of the product and encourages green design. Its goals reduce real tonnage normalized using an “eco-efficiency” metric (sales divided by environmental impact). Sony reports that this goal is another facet of making products that people want to buy.
- Subaru’s Lafayette, Ind., automotive assembly facility has been “zero landfill” since 2004 by aggressively recycling. The plant incinerates the remainder to generate electricity. It focuses on improving the yield ratios of raw materials, saving raw material costs as well as reducing waste ([www.fhi.co.jp/english](http://www.fhi.co.jp/english)).
- Xerox embraced a goal of zero waste to landfill in 2010. To that end, Xerox provides

prepaid labels to customers to return spent materials to the company. Once the materials have been returned, Xerox recovers the valuable components, recycles or remanufactures them, and tests the remanufactured products to meet quality standards of traditionally manufactured products. In 2009, Xerox diverted 45,000 metric tons from landfills ([www.xerox.com/corporate-citizenship/2011](http://www.xerox.com/corporate-citizenship/2011)).

- GM has 78 manufacturing facilities sending zero waste to landfills. The facilities focus on reducing the use of hazardous materials. They recycle spent solvents into components of floor coverings; they compost organics on-site and recycle pallets. GM notes that in these facilities, on average 97 percent of waste streams are reused or recycled, while the remainder is converted to energy at waste-to-energy facilities (<http://www.gm.com/zerolandfill>). The U.S. Environmental Protection Agency (EPA) Wastewise program supports voluntary efforts such as GM’s toward zero waste: “The success of General Motors in creating zero-landfill facilities shows that zero waste goals can be a powerful impetus for manufacturers to reduce their waste and carbon footprint” (*GM Plans to Dump Use of Landfills*, USA TODAY, Sept. 4, 2008).
- The U.S. Army announced in 2011 that six locations will pilot zero energy and zero waste programs. They will consume only as much energy or water as they produce and eliminate solid waste to landfills. “This is a significant step in addressing the Army’s sustainability and energy security challenges,” said Katherine Hammack, assistant secretary of the Army for installations, energy, and environment. “Striving for net zero is operationally necessary, financially prudent, and critical to our mission” ([http://www.defense.gov/home/features/2010/1010\\_energy/](http://www.defense.gov/home/features/2010/1010_energy/)).
- A volunteer nationwide program across industries, the Responsible Purchasing Network provides green purchasing guides that detail best practices for responsible

procurement and end use. Best practices include product-specific advice for purchasing departments' responsibilities, including providing environmental, sustainability, and governance (ESG) guidance to staff; forming stakeholder teams to analyze issues and to capitalize on opportunities; establishing baseline product inventory data and ESG measures; setting ESG procurement goals; and measuring progress toward these goals.

## Zero Waste Defined

A working definition of zero waste originated from a working group of the Zero Waste International Alliance in 2004. It states:

Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use. Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them . . . (www.zwia.org).

While the goal is 100 percent diversion from landfills and incinerators, organizations that divert more than 90 percent of their waste are successful under this definition.

## Zero Waste Principles

When implementing a zero waste program, businesses should consider the following principles which are based on Zero Waste International Alliance guidance:

1. **Commit to the triple bottom line**—focus on social, environmental, and economic performance standards together.
2. **Be transparent**—maintain clear accounting and reporting systems, publish third-party verified annual sustainability reports, and communicate product life-cycle impacts to all

stakeholders including employees, customers, and the community.

3. **Apply the precautionary principle to product and process design**—beginning with product inception, design products for easy reuse, remanufacture, or repair. Reevaluate products and services regularly to assess wastefulness or toxicity, and implement related action plans.
4. **Accept product life-cycle responsibility**—consider product and packaging take-back. Support remanufacturing, reuse, recycling, and composting to productively use end-of-life products and packaging.
5. **Buy reused, recycled, and composted**—use recycled content and composted products. Engage LEED-accredited (Leadership in Energy and Environmental Design) or equivalent architects to design new and remodeled facilities. Label products and packaging with the portion of post-consumer recycled content.
6. **Prevent pollution and reduce waste**—redesign supply, production, and distribution systems to reduce the use of natural resources and the production of waste. Monitor the success of these systems through continual reassessment
7. **Strive for the highest and best use when recycling**—discarded products and packaging should recover the highest value according to the following hierarchy:
  - a. Reuse for its original purpose
  - b. Reuse for an alternate purpose
  - c. Reuse of its parts
  - d. Reuse of the materials
  - e. Recycle inorganic materials in closed loop systems
  - f. Recycle inorganic materials in single-use applications
  - g. Compost organic materials to sustain soils
  - h. Compost or mulch with organic materials to reduce erosion and to retain moisture.
8. **Provide economic incentives for zero waste for customers, employees, and suppliers**—Use economic incentives to encourage customers, employees, and

suppliers to eliminate waste and maximize the reuse, recycling, and composting of discarded materials.

## How to Implement Zero Waste Projects in Your Business

Have you thought of implementing a zero waste program in your business? Consider the following suggestions divided into the three project phases: plan, implement, and monitor.

1. To **plan** a zero waste project, first define your policy on scope, resources, and time to implement the needed improvements. Engage stakeholders to define key performance indicators (KPIs) that will drive continuous improvement and align the organization; benchmark these KPIs and other best practices against competitors. Define payback criteria for approving capital programs—include qualitative measures as well as the traditional calculations such as years to payback or internal rate of return. Consider the break-even point for generating your own electricity.
2. Once the planning is complete, begin to **implement** the zero waste procedures. Prioritize waste minimization and pollution prevention projects based on which sites have the highest waste, greenhouse gas emissions, and energy cost impacts. Design and implement a fleet management program including promoting alternative forms of commuting. Design and implement a long-term, centralized energy management system with energy intensity reduction goals across all facilities. Consider management tools such as energy management software and the ISO 50001 energy management standard. Design and implement a waste minimization program with targets, objectives, and management plans; include a goal for zero-waste-to-landfill; consider using ISO 14001 environmental management system standard to support this effort. Design and implement a proactive tax incentives and credits program to capture grants, rebates, tax incentives, and other

benefits from sustainable projects. Include these incentives in the budgeting process. Design and implement green purchasing policies to drive costs and carbon out of your supply chain (for an example, see <http://www.walmartstores.com/sustainability>).

3. As the zero waste plan is implemented, begin to **monitor** to identify early victories and to sustain project benefits. Measure energy use, energy cost, and the carbon footprint associated with your operations, products, and services; benchmark to pre-implementation levels. Align energy and cost savings goals to employees' goals. Align your KPIs to the Global Reporting Initiative (GRI) or other global or national index or framework, and issue a public report based on these measures; receive third-party verification to drive investment-quality data.

An added bonus: Bloomberg (<http://www.bloomberg.com/sustainability>) and other equity investment data sources now track key sustainability measures. Your zero waste program will not only reduce environmental impacts but also reduce manufacturing raw materials costs. These benefits will be highlighted in the public data sources and will potentially improve equity analysts' views of the company.

The views reflect those of the authors and not necessarily those of Ernst & Young LLP.

**Jim Haried and Anne Munaretto** are in Ernst & Young's Climate Change and Sustainability Services (CCaSS) group in Chicago. Ernst & Young's CCaSS group has 700 dedicated professionals worldwide.



# CALL FOR NOMINATIONS

## THE SECTION INVITES NOMINATIONS FOR THE FOLLOWING AWARDS:

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### ENVIRONMENT, ENERGY, AND RESOURCES GOVERNMENT ATTORNEY OF THE YEAR AWARD

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The *Environment, Energy, and Resources Government Attorney of the Year Award* will recognize exceptional achievement by federal, state, tribal, or local government attorneys who have worked or are working in the field of environment, energy, or natural resources law and are esteemed by their peers and viewed as having consistently achieved distinction in an exemplary way. The Award will be for sustained career achievement, not simply individual projects or recent accomplishments. Nominees are likely to be currently serving, or recently retired, career attorneys for federal, state, tribal, or local governmental entities.

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### LAW STUDENT ENVIRONMENT, ENERGY, AND RESOURCES PROGRAM OF THE YEAR AWARD

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The *Law Student Environment, Energy, and Resources Program of the Year Award* will be given in recognition of the best student-organized educational program or public service project of the year addressing on issues in the field of environmental, energy, or natural resources law. The program or project must have occurred during the 2011 calendar year [consideration may be given to allowing projects that occurred in the 2010-2011 or 2011-2012 academic years]. Nominees are likely to be law student societies, groups, or committees focused on environmental, energy, and natural resources issues.

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### STATE OR LOCAL BAR ENVIRONMENT, ENERGY, AND RESOURCES PROGRAM OF THE YEAR AWARD

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The *State or Local Bar Environment, Energy, and Resources Program of the Year Award* will be given in recognition of the best CLE program or public service project of the year focused on issues in the field of environmental, energy, or natural resources law. The program or project must have occurred during the 2011 calendar year. Nominees are likely to be state or local bar sections or committees focused on environmental, energy, and natural resources issues.

*Nomination deadlines: May 14, 2012.*

*These awards will be presented at the ABA Annual Meeting in Chicago in August 2012.*

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### 2012 ABA AWARD FOR EXCELLENCE IN ENVIRONMENTAL, ENERGY, AND RESOURCES STEWARDSHIP

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The *2012 ABA Award for Excellence in Environmental, Energy, and Resources Stewardship* was established in 2002 to recognize and honor the accomplishments of a person, organization, or group that has distinguished itself in environmental, energy, and resources stewardship. Nominees must be people, entities, or organizations that have made significant accomplishments or demonstrated recognized leadership in the areas of sustainable development, energy, environmental, or resources stewardship. This may include a major development in law or policy that serves to enhance conservation, responsible development, prudent resource use, and pollution abatement or mitigation, or it may be a recognition for a sustained period of leadership in the development of law and policy in this area. The Award may also be given for significant achievements in legal practice or in business, including corporate charitable contributions of funds, land, or resources; in written articles; in teaching; in advocacy before courts, agencies, legislators, or other institutions; or for any other significant achievement that evidences excellence in environmental, energy, and resources stewardship.

*Nomination deadline: June 18, 2012.*

*The award will be presented at the 20th Section Fall Meeting in Austin, TX in October 2012.*

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FOR FURTHER DETAILS ABOUT THESE AWARDS,  
PLEASE VISIT THE SECTION WEB SITE AT  
[www.ambar.org/EnvironAwards](http://www.ambar.org/EnvironAwards)

