

Innovation, Management Systems and Trading Committee Newsletter

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FROM THE EDITOR: SUSTAINABLE SUPPLY CHAIN STRATEGIES

Michael D. Wallander

I am pleased to offer this issue of the Innovation, Management Systems and Trading Committee Newsletter, which explores the topic of “sustainable supply chain strategies.”

Every type of organization—public or private, for profit or not-for-profit, buyer or supplier, large, mid-sized, or small—should be concerned about its supply chain. As lawyers that service these organizations, we have a critical role to play in determining whether supply chain considerations, such as global climate change, will yield greater risks and liabilities or new opportunities for our clients. This is true from both a service offering standpoint as well as from a consumer standpoint.

While lawyers have a myriad of roles to play in implementing sustainable supply chain strategies, this is an area that is largely underserved by the legal profession. The most obvious role that a lawyer plays is in support of the procurement function by drafting and negotiating supplier contracts. Additional, less obvious services may include assisting in establishing codes of conduct that relate to supply chain programs, such as addressing anti-trust considerations that may apply to industry-wide code development; advising on FTC and other requirements associated with marketing of “green” products and services; assisting in

implementing audit-oversight or partnership-model supply chain programs; advising on international trade considerations as well as global human rights and environmental aspects (such as the EU REACH regulation discussed by one of the newsletter authors) of the contracts and programs; and, increasingly, addressing potential securities disclosure implications, especially regarding carbon and climate change exposure in the supply chain.

Moreover, law firms are increasingly being viewed by their clients—and are viewing themselves—as integral members of their clients’ supply chains. As organizations seek to reduce their “carbon footprint,” including through supply chain reductions, the ABA-EPA Law Office Climate Challenge Program will help law firms address these considerations: <http://www.abanet.org/enviro/climatechallenge/home.shtml>.

The following articles present a broad discussion on sustainability innovation that is taking place in the supply chain. Michael Vandenberg begins this issue with an examination of how supply chain contracting may present an effective supplemental measure to public governance mechanisms to address global climate change. Next, Paul Dickinson, CEO of The Carbon Disclosure Project (CDP), an organization that has been leading the way in promoting voluntary corporate disclosure of carbon, discusses how CDP is developing an approach to report on carbon in the supply chain through its Supply Chain Leadership Collaboration Program. John Kinsella of Environmental Resources Management (ERM) next presents how an

**Innovation, Management Systems
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In this issue:

From the Editor: Sustainable Supply Chain Strategies
Michael Wallander 1

The Global Private Governance Response to Climate Change
Michael P. Vandenberg..... 2

Carbon in the Supply Chain: The Carbon Disclosure Project Supply Chain Leadership Collaboration
Paul Dickinson 5

Using Management Systems and Process Improvements to Create a Sustainable Supply Chain
John Kinsella 8

Reach and the Sustainable Use of Industrial Chemicals
Tzvi Levinson and Christina Folman 10

ICLEI—The Power of Green Procurement by Local Governments
Annie Strickler..... 13

Small Steps to a Greener Law Firm
Yalmaz Siddiqui 16

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environmental management system (EMS) can be used as an effective tool in developing a more sustainable supply chain. Tzvi Levinson and Christina Folman address the EU REACH regulation applicable to management of chemicals in the supply chain. Next, Annie Strickler of ICLEI USA describes how local governments are bringing to bear their collective purchasing power to drive the market to more sustainable products and services with a view towards a life cycle analysis of their buying decisions. Lastly, Yalmaz Siddiqui, Environmental Strategy director at Office Depot, discusses why law firms should consider “going green” as well as steps to consider taking that include participation in the ABA-EPA Law Office Climate Challenge Program.

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**THE GLOBAL PRIVATE GOVERNANCE
RESPONSE TO CLIMATE CHANGE**

Michael P. Vandenberg

The supply-chain strategies discussed by the articles in this issue are part of a larger global phenomenon: the emergence of new methods for achieving public ends using private markets. National governments and international institutions have struggled to use traditional public governance tools to address climate change, generating a gap between government action and the preferences for emissions reductions of consumers, corporate firms, and non-governmental organizations (NGOs). The response has been global private governance: private actors seeking to achieve typically public ends, such as reducing externalities, through private market interactions rather than through national or international governmental regulation. See Michael P. Vandenberg, *The Private Life of Public Law*, 105 COLUM. L. REV. 2029 (2005); Errol Meidinger, *The Administrative Law of Global Private-Public Regulation: the Case of Forestry*, EUROPEAN J. OF INTL. L. 47, 48-57 (2006). This short essay addresses the remarkably widespread nature of global private

governance in the environmental area, examines why a combination of private and public governance measures are an essential part of the climate puzzle, and raises concerns that should not be overlooked as private actors play public roles.

Environmental terms are included in the supply-chain contracts of a surprisingly large number of firms. In a recent study, I examined the largest firms by sales in eight sectors, including sectors with a large retail focus and those with an exclusive industrial focus. See Michael P. Vandenbergh, *The New Wal-Mart Effect: The Role of Private Contracting in Global Governance*, 54 UCLA L. REV. 913 (2007). I examined public statements regarding supply-chain contracting practices and found that more than half of the firms included environmental requirements in some part of their supply-chain contracting. The firms that required supply-chain provisions represented 78 percent of the total sales of the firms studied, suggesting that supply-chain contracting is more common among large firms than small firms. In some cases these supply-chain requirements simply require suppliers to comply with existing environmental laws, but in many others they require environmental actions that exceed public regulatory requirements. Examples include the adoption of environmental management systems and bans on the use or release of legal but toxic chemicals. The study did not examine the extent to which buyers enforce these environmental supply-chain contracting provisions or the effect of these provisions on suppliers' environmental performance. At the same time, the study identified a number of theoretical and empirical studies that provide reason for optimism, including the recent growth in the market for private standard-setting, monitoring, and enforcement services.

Supply-chain contracting and other private global governance approaches may be particularly important for addressing global climate change. See Michael P. Vandenbergh, *Climate Change: The China Problem*, 81 SO. CAL. L. REV. (forthcoming 2008). The limited success of the Kyoto Protocol and the recent Bali negotiations demonstrates the difficulty of creating incentives for the major emitters of greenhouse gases (GHGs) to commit to and achieve meaningful

reductions. In particular, the two largest emitters, China and the United States, have yet to do so. Offset schemes such as the Clean Development Mechanism can create some incentives for emissions reductions. A global cap and trade scheme also could allocate excess allowances to countries that need additional incentives, but if the number of allowances allocated is too great, it will be extremely difficult to achieve the emissions levels necessary to reduce the risk of catastrophic climate change. Trade measures will face difficult World Trade Organization hurdles. Although some mix of these traditional public law measures will be necessary, they may not create sufficient incentives or may not do so in the limited time available to achieve emissions targets.

Supply-chain contracting and other private governance mechanisms may be a complement and stimulus to public national and international action. For example, the United States and Europe account for 41 percent of Chinese exports and a large share of Chinese GHG emissions. Supply-chain contracting requirements by buyers in the United States and Europe could create market incentives within China to identify efficiencies and to invest in less carbon-intensive energy production. To avoid leakage and other problems, these supply-chain requirements would need to apply to all domestic and foreign suppliers, not just those from China. This private market incentive may occur far more quickly and generate reductions far more efficiently than a public regulatory approach alone.

The demand from consumers, firms, and NGOs for carbon emissions requirements in supply-chain contracts is limited today by information shortcomings. Consumers lack information about the carbon emissions associated with the products they buy, resulting in absurd examples such as mini-vegetable trays being flown thousands of miles from London to Nairobi to take advantage of differences in labor rates. Firms are unaware of the inefficiencies in their supply chains, as exemplified by the Carbon Trust's recent identification of the carbon emissions associated with buying potatoes by the pound in England. NGOs are unaware of the extent to which a focus on encouraging firms to use supply-chain incentives may yield faster near-term reductions than lobbying for the adoption of

public measures and may create incentives for national governments to sign on to global treaties.

Private or public schemes in the United States and Europe to disclose product carbon emissions and corporate carbon footprints may be necessary to overcome these information problems. Small but important extensions in public and private carbon disclosure programs will be necessary. For example, public and private standards for corporate carbon emissions disclosure should not be designed simply to facilitate compliance with a facility-specific cap and trade regime. Doing so will enhance incentives to export carbon-intensive production. If disclosure requirements include suppliers in the facility or firm footprint, the incentives will exist for firms, consumers and NGOs to insist on genuine reductions throughout the supply chain. Similarly, although carbon labeling of consumer products has received little attention in the United States, the potential effect on supply-chain contracting suggests that a public or private carbon labeling scheme deserves a second look.

Private global governance measures are not a silver bullet. Yet the important question is not whether they are perfect, but whether they are preferable to inaction or the exclusive reliance on public governance measures. In addition, in many cases they constitute a complement, not an alternative, to public measures. Only time will tell whether private measures meet efficacy goals: whether they achieve emissions reductions in time periods and at costs that compare favorably to public measures. The prospects are quite good. Supply-chain contracting has had substantial effects in other fields, and environmental supply-chain contracting is becoming widespread. A robust market exists for private standard-setting and assurance services, making it possible to provide some level of comfort that acceptable levels of compliance will occur. Again, the standard is not total compliance, but acceptable levels of compliance, as compared against levels that can be expected in developed and developing countries. The costs of including suppliers in corporate carbon foot-printing will be substantial, as will consumer product labeling. But will they exceed the costs of the combined national and international public regulatory regime that is likely to develop once barriers to public action are overcome?

Legitimacy goals are a second genuine concern: will a private market response that fills standard-setting and other roles traditionally filled by governments create concerns about democratic accountability? Certainly the traditional means of ensuring that governmental functions respond to the preferences of citizens—the ballot box—does not exist regarding supply-chain contracting and other forms of private governance. But the question once again is not whether a perfect congruence will exist between citizen preferences and governmental actions, but whether the private governance option is preferable to the alternatives. It is unclear why firms will be any less responsive to democratic concerns than they are now. Concerns could arise about the role of consumers and NGOs. Consumers could act based on inadequate information or act irrationally based on adequate information. NGOs could act to enhance their own interests, rather than to pursue more general public interests. Consumers will have to pay to express preferences, however, and NGOs are unlikely to have great influence unless they can influence either consumer behavior or regulators, who are subject to democratic control. As a result, although accountability concerns exist, it is unclear why private governance involving these actors should generate concerns that exceed the current mismatch between citizen preferences and government action.

In short, the articles in this issue not only demonstrate the importance of supply-chain contracting, they represent part of a growing private global governance phenomenon. The new global private governance measures are re-shaping the way environmental matters are addressed around the world. With proper attention to legitimate concerns, the new private governance measures can create market-based incentives that address otherwise intractable environmental problems and that do so with remarkable levels of efficiency and accountability.

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CARBON IN THE SUPPLY CHAIN: THE CARBON DISCLOSURE PROJECT SUPPLY CHAIN LEADERSHIP COLLABORATION

Paul Dickinson
CEO, The Carbon Disclosure Project

There are trends in business that start small and after several years become an integrated part of every successful business. The Internet is one such example. A decade ago it was a niche, few companies had their own Web site and e-mail was a luxury rather than a necessity. Now the Internet has become an integral part of every business, from an operational as well as a communications point of view. Companies who don't embrace it miss out on a whole raft of commercial opportunities.

Climate change is exactly the same. If climate change considerations are not integrated into your company's business model, your company risks being left behind and overtaken by the companies who do have a strategy on climate change related risks and opportunities and do have an emissions reduction strategy. Consumers, regulators, investors, and business partners are all moving in the same direction and demand is increasing on companies to incorporate climate change related issues into their business strategy.

The Carbon Disclosure Project (CDP) has been key in increasing awareness on this issue. CDP is a not for profit organization which works with over 385 institutional investors that hold \$57 trillion in assets under management. Every year, CDP sends out an information request, on behalf of institutional investors, for climate change related disclosure to over 3,000 listed companies globally. For many companies this is the first time emissions are considered. Collecting this information for CDP can be extremely informative and acts as the first step on the path to carbon management. The process of measurement of greenhouse gas (GHG) emissions often highlights areas within a business where there is scope for energy savings and efficiencies which may have not been previously identified. Not only does this provide opportunities to cut emissions, but in turn, will often lead to significant cost savings.

CDP has now extended this tried and tested system to work with large procuring organisations to dig deep into their supply chain, to find out more about what the companies they do business with are doing to manage the challenges and the opportunities associated with climate change. So, in October 2007, CDP launched the Supply Chain Leadership Collaboration. Companies such as Tesco, Unilever, HP, Dell, Cadbury Schweppes, L'Oreal, and P&G, and other global leaders have come together to work through the CDP process to measure emissions through their supply chain.

As companies become more aware of the implications and impact of their business activities on the climate, it is becoming increasingly important, not only to focus on climate change strategy in-house, but also to look outwards and find out what business partners, such as suppliers are doing, too.

The CDP Process

Every year, CDP sends out an annual request for climate change related disclosure to over 3,000 listed companies globally, on behalf of 385 investors. This information request asks them to disclose their GHG emissions and their assessment of risk and opportunity associated with climate change. It also requests that they report on their strategy regarding climate change. Companies report through the CDP online system at www.cdproject.net, which now holds the largest database of corporate climate change data, and every year in September the responses are made public and analyst reports are launched on findings.

This system has now been extended under the Supply Chain Leadership Collaboration, to write to suppliers on behalf of purchasing organizations.

As noted, this process is, for many companies, the first time they consider their actual emissions. Collecting this information can be extremely informative and acts as the first step on the path to carbon management. The process of measurement often highlights areas within a business where there is scope for opportunities like energy savings and efficiencies which may have not been previously identified. Not only does this provide

opportunities to cut emissions, but in turn, will often lead to significant cost savings.

A Case Study

The nature of the CDP process enables companies to report through a transparent, third party, independent system. Many of the companies involved in CDP's Supply Chain Leadership Collaboration also respond to CDP's information requests and benefit from the recognition of responding.

Wal-Mart is one such company. Jim Stanway, Wal-Mart's Director, Project Development, has said: "Over the past two years, Wal-Mart has gained a new appreciation of the CDP process and decided to file its CDP2006 submission. This process provided the company with valuable insight, including data showing the refrigerants used in grocery stores made up a larger percentage of the company's greenhouse gas footprint than its truck fleet. Although a significant effort is focused on trucks to improve their fuel efficiency, this new insight is focusing Wal-Mart on the potential of reducing its refrigerant footprint."

Increasingly, companies interested in reducing their total carbon footprint have to look beyond their own backyard. So, for example, if a food manufacturer is trying to cut the emissions of a particular product, or, indeed, of the whole company, the manufacturer must look at the emissions generated through the supply chain involved in the production of the product. The majority of the emissions may be generated on the farm where the milk is produced for a chocolate bar, or the potatoes grown for crisps, or the chicken raised for the chicken burger. The food manufacturer has to focus on these emissions, as well, in order to cut the product's overall carbon footprint.

It is not just the procuring organizations that benefit from this process, it is also the suppliers, because the process of asking the proper questions leads to positive change. It engages suppliers, often for the first time, on issues relating to climate change and begins the journey of understanding and addressing the climate change implications of their business. Some of the suppliers working within the CDP system have

already identified areas where emissions cuts can be made. Areas, such as the manufacture of packaging, have seen suppliers moving to more energy efficient systems. The key in asking the questions is that it helps companies identify areas where it is possible to adopt lower carbon alternatives.

Areas Covered in the CDP Supply Chain Leadership Collaboration Questionnaire:

- GHG emissions disclosure.
- Strategy on GHG emissions management and cost implications.
- Commercial risks and opportunities presented by climate change.
- Company strategy drawn up to deal with climate change.
- Assessment on regulatory risks from imposition of stringent targets and constraints on emissions.
- Assessment on behavioral risks from shifting sentiments of consumers, litigants, investors, and corporations.
- Assessment on physical risks from extreme weather events.
- Assessment on technological risks from current technologies being superseded.
- Breakdown of Scope 1 and 2 emissions by business division, business unit, factory, product group, product line, SKU.
- The largest emitting practices/groups within a company
- Supplier specific information

How to Measure

When the CDP supply chain questionnaire arrives at the CEO's office, it may be the first time a company has ever been asked to measure greenhouse gas emissions. The best place to start is the GHG Protocol, which divides emissions into three separate categories—Scope 1, Scope 2, and Scope 3. A good place to start is with fuel bills, which can be used to help assess Scope 1 emissions, and electricity bills, which can be used to assess Scope 2 emissions. Measurement of Scope 3 emissions requires engagement with suppliers.

Types of Emissions

Scope 1- Scope 1 GHG emissions occur from sources that are owned or controlled by a company, such as combustion facilities (e.g. boilers, furnaces, turbines, heaters, incinerators, engines, flares, etc.), combustion of fuels in transportation (e.g. cars, buses, planes, ships, barges, trains, etc.), and physical or chemical processes (e.g. in cement manufacturing, catalytic cracking in petrochemical processing, aluminum smelting, etc.).

Scope 2- Scope 2 GHG emissions result from the activities of other entities, but that occur as a result of your company's consumption. Scope 2 covers indirect GHG emissions from the generation of imported electricity, heating, cooling, or steam consumed by your company. For example, your company's purchase of electricity (often referred to as "purchased electricity") has been made possible by the generation of electricity by your supplier and GHG emissions will have occurred as a result of this generation of electricity.

Scope 3- Scope 3 covers other indirect emissions that are a consequence of your company's activities, but which arise from GHG sources that are owned or controlled by others. Scope 3 emissions cover—among other things—GHG emissions resulting from the manufacture of goods supplied to you (other than electricity, steam, heating, or cooling). Supply Chain emissions fall under Scope 3.

Managing Risk

As we move towards a carbon constrained world, it becomes increasingly important for companies to manage not only their own carbon emissions, but also their carbon related risks. These risks, which can affect both a company or their suppliers, cannot be managed without knowledge and data:

- reputational risks associated with public perception of a company's actions, policies, and products.
- risks associated with the supply chain
- shifts in consumer attitude and demand
- risks associated with the production and

supply processes

- risks from litigation regarding climate policy or emissions intensity
- physical risks from extreme weather conditions
- regulatory risks associated with international, national, regional or state regulation of GHGs, carbon taxation, statutory emissions limits, trading program, technology incentives, or process or product standards

By working through the CDP process, companies are able to identify these risks and are in a much stronger position then to act on them.

Some companies are already far along in identifying risks and opportunities associated with climate change and are actually implementing ambitious emissions reductions targets. Cadbury Schweppes plc, one of the founding members of the Supply Chain Leadership Collaboration, has identified areas within the business where it can make significant emissions reductions. Cadbury Schweppes is switching from coal-fire to gas-fire boilers at its factories in Bournville in the United Kingdom. Cadbury Schweppes is also increasing the amount of renewable energy the company is using and is switching to new technologies of combined heat and power in some of its plants. Such initiatives are vital to Cadbury Schweppes in reducing its carbon footprint and its aim of achieving a 50 percent cut in carbon emissions by 2020.

As companies gather more information using the CDP process within their own businesses and through their supply chains, they are in a much stronger position to benefit from the opportunities associated with climate change as well as to manage their risks.

The way in which companies then choose to use the data varies widely. Some may use it to assess their exposure to climate change related risks, others to share best practice in how energy efficiencies can be realized, others will use it as a learning experience to feed into their company's carbon and climate change strategies, and some companies may actually use it to select suppliers with low emissions and the most energy efficient systems. The key remains, though, that you have to measure your emissions before you can

manage them and that is the case both within an individual company as well as across its whole supply chain and this is the first step for a company in implementing a successful greenhouse gas emissions reduction strategy.

USING MANAGEMENT SYSTEMS AND PROCESS IMPROVEMENTS TO CREATE A SUSTAINABLE SUPPLY CHAIN

John Kinsella
ERM

“At the beginning of 2007, we picked the Green Supply Chain as our number one trend for the coming year” (Dan Gilmore, Supply Chain Digest January 2008)

As discussed in the prior article, the Carbon Disclosure Project Supply Chain Leadership Collaboration seeks to create a single standardized approach for measuring the carbon footprint of supply chains. Member companies, including Cadbury Schweppes, Dell, Hewlett Packard, L’Oreal, PepsiCo, Nestlé, Procter & Gamble, Tesco, Imperial Tobacco, and Unilever, each selected up to fifty suppliers for inclusion in this program. Some members will work with suppliers at a national level, others will work internationally.

Organizations that fail to take steps to understand the environmental impacts of their products and operations risk their place in their customer’s supply chains.

Organizations across all business sectors are addressing these risks by leveraging Environmental Management Systems (EMS) (such as ISO 14001) and process improvement tools (such as Lean and Six Sigma) to create sustainable supply chains for themselves, and in so doing, improving their own sustainability profile.

Environmental Management Systems

Many companies implement an EMS and certify them to the ISO 14001 standard because of customer supply chain requirements. An EMS is a defined process to identify, control, and eliminate those

activities and products that can have a detrimental impact on environmental performance. The Plan-Do-Check-Act cycle is the foundation of an EMS. The **plan** has goals, metrics, and target dates. The organization must **do** what is required to meet the plan. A **check** on performance determines how well the plan is working and allows corrections to be made. Finally, the organization can **act** to improve the EMS and by extension, overall environmental performance.

There are three ways an EMS creates a sustainable supply chain. First, it requires you to examine every *aspect* of your business and to determine what impacts your products and processes have on the environment. You look at your entire operation from raw material input to the output of finished product and identify those with the most severe *impacts*. For example, for a semiconductor manufacturer, wastewater effluent and solvent emissions would be significant. Conversely, for a Port Authority, emissions from idling trucks and vessels would be topping your list. Secondly, the EMS requires you to set measurable goals to reduce and eliminate these impacts. Finally, the EMS requires you to track progress towards meeting your goals and to report your progress to management on a routine basis. The EMS embodies a very straightforward process to identify, rank, and address environmental risks and to minimize and eliminate them to improve your environmental performance.

How an EMS Builds a Sustainable Supply Chain

While analyzing the environmental aspects of their business, an oil company identified the use of a descaling agent as a potential problem. The agent was injected into the pipeline to ensure scale would not impede oil flow. Unfortunately, harsh environmental conditions (extreme temperatures and winds) would persistently loosen feed lines and spill the agent onto surface soils requiring their removal and incineration as a hazardous waste. The EMS team asked why the agent was needed. What would happen if its use was suspended? Tests were run—the amount of scale build up had a negligible effect on oil flow. Use of the agent was discontinued with a direct savings of \$100,000 per year in product purchase cost, an elimination of

contaminated soil cleanup costs, and better deployment of maintenance crews resulted in overall cost savings exceeding \$250,000. The lesson learned for the oil company: reduced environmental risk and improved environmental performance. Lesson learned for the supplier: they were focused on product sales, not client risk management. They could have worked with their client on alternatives, or a maintenance program, kept a satisfied client and obtained sales from services rather than solely through products.

Lean Process Improvement

The Lean technique looks at how to perform a function faster, quicker, and cheaper. Most business processes are not Lean. About 20 percent of the activities contribute 80 percent of the waste in the process. By applying the Lean process to your operations, you will find ways to create a more sustainable supply chain.

How Lean Improved Supply Chain Sustainability

Once the EMS has identified operations that can have significant environmental impacts, documented procedures are necessary to minimize those impacts. The maintenance division of a maritime agency applied Lean process thinking to their operating procedures. Current procedures were poorly written or non-existent. The existing procedures were long on words and short on clarity with a correspondingly low readership. By applying the Lean process, all procedures were transformed into one-page flow charts that were easy to follow and understand. They were written with direct input from the machinists, carpenters, and craftsmen that were to use them. They were laminated and placed at the point of use. They helped clarify how various waste streams were to be segregated and disposed. The procedures also drew attention to the purchasing, use, and disposal of hazardous materials used in the shops. Division personnel provided input to the organization's green purchasing program and took a more direct interest in the ordering and use of vendor products based on their environmental desirability. A systems audit of the division conducted shortly after the procedures had been deployed measured a 15 percent decline in audit nonconformities.

Six Sigma

Six Sigma is a management process developed by Motorola that defines, measures, analyzes, improves, and controls existing processes. The idea is to identify defects in a process and then systematically eliminate them. Benefits include process cost reduction, cycle-time improvement, less waste, more reliable products and services, and increased customer satisfaction.

How Six Sigma Identified Unsustainable Supply Chain Operations

India has thousands of small, coal-fired foundries that are a major source of local air pollution resulting in poor worker health. Regulatory enforcement was ineffective since the majority of the businesses do not have the resources to upgrade their equipment. Engineers used Six Sigma to determine the root causes underlying the problem. Optimum operating parameters for the existing scrubber units were identified. In addition, the fuel (high sulfur coal and others wastes) were direct contributors to high sulfur dioxide levels. Improved operation of the foundry air scrubbers, an alternative supply of low sulfur coal and screening out of impurities reduced particulates ten-fold from 200 mg/m³ to less than 20 mg/m³. A similar level of reduction in sulfur dioxide levels from 45mg/m³ to 4.5mg/m³ was achieved. This resulted in improved foundry performance and improved employee health and productivity (Sekhar & Mehanti, J. OF MGMT. OF ENVT'L QUALITY, 2006).

What Can Organizations Do?

Implement an EMS to identify, prioritize, and eliminate those activities and products that have (or could) have detrimental impacts on the environment. Look for ways to Lean your supply chain to remove unnecessary and unsustainable products. Use Six Sigma techniques to determine the root causes of pollution problems and then adjust the process to make it more sustainable. Finally, create a formal Sustainable Purchasing Matrix procedure that would consist of the following steps:

1. Categorize current products.
2. Rate current products on a "sustainability index" (good to bad).

3. Screen potential replacement products based on:
 - a. environmental and health risk,
 - b. effectiveness,
 - c. ease of use,
 - d. disposal requirements, and
 - e. cost.
4. Are replacements available? If they are, run a test evaluation of samples with end users.
5. If successful, phase in new products.

Engage your supply chain in finding solutions. Work with legal counsel to develop procurement guidelines and contracts that further your supply chain goals. Implement a training program for your employees and suppliers that clearly demonstrates your expectations for your suppliers to achieve if they want to continue to remain a preferred provider in your supply chain.

Summary

Organizations across all business sectors are leveraging EMSs and process improvement tools (such as Lean and Six Sigma) to create sustainable supply chains for themselves, and, in so doing, improving their own sustainability profile to their customers.

Implement an EMS to identify, prioritize, and eliminate those activities and products that have (or could) have detrimental impacts on the environment. Look for ways to Lean your supply chain to remove unnecessary and unsustainable products. Use Six Sigma techniques to determine the root causes of pollution problems and then adjust processes to make them more sustainable. Create a formal Sustainable Purchasing procedure. Engage your supply chain in finding solutions.

LIKE TO WRITE?

The Innovation, Management Systems and Trading Committee Newsletter welcomes the participation of members. If you would like to lend a hand by writing, editing, or identifying article topics, please contact the editor, Michael Wallander, at wallander@gtlaw.com.

REACH AND THE SUSTAINABLE USE OF INDUSTRIAL CHEMICALS

Tzvi Levinson
Christina Folman
The Levinson Environmental Law Firm

REACH, the new European Union (EU) legislation regulating the chemicals sector in the European market, sets up a comprehensive and in many ways novel system for the management of substances.

REACH stands for Registration, Evaluation, Authorization and Restriction of Chemicals, (Regulation EC No 1907/2006 of the European Parliament and of the Council). The Regulation which is directly applicable in the domestic legal system of the EU Member States imposes stringent conditions for the manufacturing and importing of chemicals and articles (i.e., finished products) intentionally or incidentally releasing chemicals. Most original elements introduced into the system are underlined by the need to acquire an in-depth understanding of the hazardous characteristics of chemicals in order to limit their negative impact while at the same time protecting the interests of the industry. This article analyzes certain aspects of the REACH regime and their contribution towards sustainable production and use of chemicals.

Registration

REACH imposes a series of obligations on EU manufacturers and importers of chemicals and articles, the most important of which being the registration of substances manufactured or imported in the EU market in quantities of 1t/y or more. Registration entails the compilation and submission to the European Chemicals Agency (ECHA) of a technical dossier on the properties of the substance. The general rule as set out in article 5 is that: "...substances on their own, in preparations or in articles shall not be manufactured in the Community or placed on the market unless they have been registered in accordance with the relevant provisions..." Registration puts the responsibility on the industry to (a) collect, thoroughly assess, and submit the data on the physico-chemical properties of the substance; and (b) recommend risk management measures.

By imposing a general obligation to register all substances (regardless of their hazardous characteristics), lawmakers and policy setters intended to tackle the main problem of the chemical sector, namely, lack of sufficient knowledge on the properties and quantities of most widely used substances. The pre-existing system was lacking for comprehensive risk management measures as industrialists could manufacture and use largely untested chemicals. Following the introduction of REACH, manufacturers and importers need to identify and thoroughly assess all the chemicals they place on the market, except those which are identified as covered by sector specific legislation, such as food or pharmaceutical uses, or otherwise partially or totally exempted from the scope of REACH. An additional layer of control in the use of chemicals is the requirement to register substances intentionally released from articles, such as markers or air fresheners. This will substantially increase the responsibility of manufacturers and professional users and the awareness among the consumer protection organizations and the wider public. Articles which incidentally release very hazardous substances (defined by REACH as Substances of Very High Concern) contained therein above a defined threshold are subject to notification. That is, the substances incidentally released are notified to the ECHA. This is much simpler than registration but it nevertheless requires an analysis of the fate of chemicals in the context of the whole life cycle of the article in question.

Compliance with the registration requirements and compilation of the technical dossier will result in a wealth of new information becoming available and ensuring safer use of chemicals. In addition to the technical dossier, manufacturers and importers of substances put on the market in quantities of 10 t/y or more will submit a chemical safety report.

Flow of Information in the Supply Chain

Expected changes to the traditional way of communicating information in the supply chain will lead to an increase in the exchange of information among manufacturers, suppliers, and professional users of chemicals. In addition, Safety Data Sheets will improve as they will contain more information on a substance's

properties and will have exposure scenarios annexed to them. This in turn will make it easier to apply efficient risk management measures.

The exposure scenarios are part of the Chemical Safety Report prepared for registration purposes. As noted above, a manufacturer or importer of substances in quantities of 10 or more tons per year should conduct a Chemical Safety Assessment and complete a Chemical Safety Report to be submitted in addition to the registration dossier. For very hazardous substances, the Chemical Safety Report should include exposure scenarios addressing all identified uses of the registrant. This means that the manufacturer needs to be in contact with the downstream users as the latter will require of the former to address their use when preparing the Chemical Safety Report.

The downstream user may withhold the information on use in order to protect commercially sensitive information. In such a case and if the use is not covered by the exposure scenarios annexed to the Safety Data Sheet, the downstream user may prepare a Chemical Safety Report for substances used in quantities above 1 t/y. This obligation may also arise if for any other reasons the use is outside the conditions described in the exposure scenario or for any use the supplier advises against.

Downstream users and any other actors in the supply chain have the duty to communicate information to the next actor up the supply chain whenever on hold of new data on hazardous properties or other information that might call into question the appropriateness of the risk management measures.

Furthermore downstream users may participate in the Substance Information Exchange Fora. These will be set up by potential registrants of the same substance in order to facilitate the task of compiling a registration dossier. Each forum will bring together all those having information on a given substance so that it can be shared in exchange for compensation. Apart from the obvious advantages of sharing data and costs, the fora will serve another main goal of REACH, namely the reduction of vertebrate animal tests. It is compulsory for a holder of data resulting from such tests to share

the information. A refusal to do so can bring to an end the registration process of the non-cooperative registrant. In case a study involving tests is not available within the fora, the participants are required to come to an agreement so that only one study is conducted per information requirement by one participant on behalf of the others.

In view of the REACH provisions on sharing information up and down the supply chain and the potential participation of downstream users in the Substance Information Exchange Fora, one can expect that various benefits will accrue from downstream users taking informed decisions on substances' applications with added safety and precautionary measures.

Authorization

Substances categorized as (a) Cancerous, Mutagenic and Toxic for Reproduction category 1 and 2; (b) Persistent Bioaccumulative and Toxic; (c) very Persistent very Bioaccumulative; and (d) other substances giving rise to an equivalent level of concern, are defined in REACH as "Substances of Very High Concern." This is due to the grave harm they can inflict on human health and the environment.

The aim of the authorization mechanism is to create monetary, administrative, and other obstacles in their use so that companies will have the incentive to substitute these chemicals with safer alternatives. Unlike registration which has a minimum threshold of 1t/y, authorization applies to substances irrespective of amounts manufactured or used. Thus it covers small quantities and nanomaterials.

Once substances are included in the list of substances subject to authorization the manufacturers and downstream users will need to apply for authorization for a specific use. The application should be accompanied by an analysis of safer alternatives, a substitution plan if existing and/or a R&D project. The application will be successful if the applicant can prove that the risks from the use of the substance are "adequately controlled." In case no alternatives are available or in process and if there are no prescribed

thresholds, the application may be granted if the socioeconomic benefits outweigh the risks.

The authorization applications are costly and the authorization granted is time limited and applicable only to a specific use. Upon review an authorization may be revoked before it expires if suitable alternatives become available.

Compliance with authorization will become quite burdensome for manufacturers and downstream users, especially in the case of Small and Medium Size Enterprise. It is likely that Substances of Very High Concern or at least a part of them will eventually be phased out due to increasing regulation and market forces.

Conclusion

The new data generated mainly from the registration process will contribute in various ways in the safer handling of chemicals and eventually in the substitution of very hazardous chemicals with safer alternatives. Part of this information will form the basis for new restrictions on the use of chemicals. New information will be inserted in the respective headings of Safety Data Sheets given to professional users. This, together with the exposure scenarios annexed to the Safety Data Sheets will lead to additional measures being taken for the protection of workers and the environment. Eventually all actors in the supply chain will be induced to take more informed decisions on the manufacture and use of chemicals.

Overall, closing the knowledge gap on chemicals is expected to be hugely beneficial to various sectors such as, protection of workers, consumer product safety, public health, protection of the environment, and product development. It is also likely that REACH will set in motion a worldwide trend in introducing stricter regulation on chemicals. This has already happened in other areas of environmental law whereby EU directives, (e.g., EU WEEE & RoHS directives) have formed the basis for similar legislation in other parts of the world.

ICLEI—THE POWER OF GREEN PROCUREMENT BY LOCAL GOVERNMENTS

Annie Strickler
ICLEI USA

When you walk into a grocery store and choose the “ecofriendly” brand of detergent, pick up energy-efficient compact fluorescent light bulbs (CFLs) at the hardware store, select recycled paper for your home printer, ask your utility for green tags, or decide to make your next car a hybrid, you are making green purchases. Cities have the power to multiply these decisions by the hundreds or thousands through “green procurement” or “environmentally preferable purchasing.”

Cities across the country and, indeed, around the world, are demonstrating their commitment to sustainable development and climate protection through “green purchasing” initiatives, also known as “sustainable purchasing” or “environmentally preferable procurement.” They are reducing their environmental impacts while simultaneously diminishing their raw materials, building, operating, maintenance, health, and disposal costs. Doing so also reflects the cities’ commitments to fiscal responsibility, social equity, and community and environmental stewardship.

U.S. cities large and small can exercise their significant buying power to have both a direct impact on the market because of the volume of products and services they procure and an indirect impact by spurring similar action across the private sector. They do so while also increasing their bottom lines. The growing emphasis on green purchasing presents unprecedented opportunity for the business community.

Local government facilities may include courtrooms, city halls, office buildings, police and fire stations, recreational facilities, parking lots, and libraries. These facilities procure goods that include computers, photocopiers, refrigerators, fax machines, lighting, and heating and cooling equipment. Cities also deal in landscaping, catering, conferences, and meetings as well as vehicle fleets.

If cities choose to make all of their buildings, products and services “environmentally friendly,” it is dizzying to consider the widespread and long-lasting benefits for our lives today as well as those of our children and grandchildren and for the business community. Replacing 500 incandescent exit signs with ENERGY STAR versions would save an estimated \$25,700 a year and \$208,300 life cycle on maintenance and energy costs and 119 and 1,190 tons of carbon emissions, respectively.

Not only can local governments pack a financial punch at the point of purchase, they can shift the market in favor of energy efficiency. Adopting a formal policy of green procurement sends a message to manufacturers, service providers and the market as a whole that green products and services are in demand. Together, U.S. state and local governments spend more than \$385 billion on goods and services and billions more to power those products. It is estimated that by specifying energy efficiency in purchasing policies, energy costs could be cut in half, not to mention contribute to a significant reduction in global warming pollution.

Life-Cycle Analysis

Cities are not viewing green purchasing as simply a one-time cost savings; they are taking a much longer view by calculating the direct and indirect costs for the full life cycle of products. This life cycle view considers how we create, use, and dispose of the products.

A Life-Cycle Analysis provides a means to overcome pricing discrepancies between traditional and environmentally preferable products by encouraging the integration of environmental factors into procurement policies. Doing so requires looking beyond initial costs. By considering the costs of operations and maintenance, worker exposure, worker productivity, and waste disposal in the final price estimates, a municipality can paint a more accurate picture of the procurement impact and true costs of a given good or service. Extended costs such as these are often hidden and can reveal previously unrecognized savings.

Seattle’s Environmentally Responsible Purchasing Policy directs departments to consider life cycle effects

from pollution, waste generation, energy consumption, recycled material content, depletion of natural resources, and the potential impact on health and nature. This opens even more windows for local governments and for business.

A Bigger Procurement Tent

Traditional procurement categories were limited largely to cleaning products, office supplies, and related services. Increasingly, local governments and companies are recognizing a broader definition that encompasses actions that have direct impacts on environmental quality, community health, and a city's bottom line.

A municipality's suite of sustainable procurement tools could now include purchasing renewable power; energy-efficient construction equipment and property design; integrated pest management; hybrid vehicle and retread tires in municipal fleets; printing with soy- and vegetable-based inks; energy-efficient office equipment and appliances; reusable, refillable, or returnable packing; buying in bulk; curbing use of bottled water; and green janitorial products and services.

Success Stories

The King County, Washington, Environmental Purchasing Program provides county personnel with information and technical assistance to help them identify and evaluate, and ultimately buy, economical and effective environmentally preferable products and services. In 2006, King County agencies purchased \$3 million worth of these products, saving \$640,000 compared to the cost of conventional products. One highlight of King County's program is that recycled paper is used for all major government functions, including more than 9 million bus schedules annually, tax statements, court forms, pet license notifications, business cards, reports, stationery, and internal printing. Other purchases include remanufactured toner cartridges, re-refined antifreeze and motor-oil, ultra-low sulfur diesel, biodiesel, hybrid vehicles, bio-based oils, low-VOC asphalt cold-patch, plastic lumber, compost, shredded wood-waste, and tire-retreading services.

As part of the Santa Monica, California, Sustainable City Plan, the city has set a target of converting twenty purchased product categories from conventional to environmentally preferred products by 2010. In 2007 the city focused on the following sectors: food packaging; carpet; computers; copy and printing paper; janitorial paper supplies; and office supplies. To that end the city develops stakeholder groups to identify best practices and products for each category, engages city staff in the mechanics of making the switch, and provides for environmentally preferable products in the contract work it oversees.

Multnomah County and the City of Portland have teamed up on their sustainable procurement efforts, including pollution prevention and toxics reductions in uniform rental and laundry service and reducing chemical use in landscaping and grounds maintenance.

In Albuquerque, New Mexico, 20 percent of the electricity used by the city government comes from wind farms located in New Mexico through the Sky Blue Program. This totals 18 million kilowatt hours each year!

Local government officials from the City of Houston, Texas have been working to stabilize the city's \$150 million annual electricity bill and have now settled on a diversified power portfolio including the use of renewable wind power. The city has negotiated a contract that would allow them to purchase up to 80 megawatts, or 700,800,000 kilowatt-hours, of renewable power which represents 50 percent of the city's total power.

As of March 2008, Atlanta, Georgia leads the country in LEED Certified buildings with a total of fifty-three projects that are either already certified or underway. More than 3 million square feet of LEED Certified buildings have already been built.

In Oakland, California, energy efficiency projects in the City Administration building save over \$180,000 per year and reduce emissions by nearly 750 tons annually. Energy retrofits at the Oakland Museum save \$160,000 per year and 500 tons of CO₂e per year.

Palo Alto, California saves \$117,625 annually by using energy efficient CFLs for interior lighting in sixty city buildings.

Pittsburgh, Pennsylvania is thinking big by significantly lowering their energy costs through energy efficient designs for larger buildings. Due to its green design The David Lawrence Convention Center saves the city \$500,000 annually.

Efficient lighting and improvements to the heating, ventilation, and air-conditioning systems in the Twin Falls, Idaho school district's eleven schools are expected to reduce energy and maintenance costs by \$3.5 million over 15 years.

The City and County of Denver, Colorado, operate a combined fleet of 3,500 vehicles. Faced with rising fuel costs, increased air pollution, and federal mandates to clean the city's air, Denver enacted the "Green Fleets" executive order on Earth Day in 1993. Managers of Denver City fleets must purchase the most cost-effective and lowest emission vehicle possible, and fuel efficiency standards are included in procurement specifications. The Green Fleets review process also includes "right-sizing" fleets by reducing vehicle size and eliminating old and underused vehicles. The effectiveness of the program is measured by fleet energy use and CO₂ emissions.

The majority of traffic signals in Albuquerque, New Mexico, use light emitting diodes (LED) instead of less efficient lightbulbs. The city estimates that this saves \$900,000 a year in energy bills.

From purchasing more sustainable cleaning and office products to embracing policies that reduce the amount of those products used, and installing energy-efficient lighting and appliance to providing the power to illuminate those lights with renewable energy, a comprehensive and sustainable approach to procurement opens the door to manifold opportunities and benefits.

Every city, town, and county in this country makes decisions about what kinds of products and services to procure that have widespread ramifications well beyond their borders. Those decisions also provide

rich opportunities to lead by example, raise awareness, and encourage participation from the community at large. Together, local governments are successfully using the power of the purse strings to advance their goals of climate protection, sustainability, and cost savings.

Resources:

Responsible Purchasing Network: <http://www.responsiblepurchasing.org/>

Environmental Protection Agency's Environmentally Preferable Purchasing: <http://www.epa.gov/epp/>

EPA Report on State and Local Pioneers: <http://www.epa.gov/epp/pubs/case/statenlocal.pdf>

Database of Environmental Information for Products and Services: <http://yosemite1.epa.gov/oppt/eppstand2.nsf>

Pacific Northwest Pollution Prevention and Resource Center: http://www.pprc.org/pubs/epp/epp_report.cfm

National Association of Counties Environmental Purchasing Starter Kit: http://www.naco.org/Content/ContentGroups/Programs_and_Projects/Environmental1/Energy/NACos_Environmental_Purchasing_Starter_Kit.htm

Department of Energy's Guide to Buying Green Power: <http://www.eere.energy.gov/greenpower/buying/>

Procura Sustainable Procurement Campaign (ICLEI): <http://www.procuraplus.org/>

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SMALL STEPS TO A GREENER LAW FIRM

Yalmaz Siddiqui
Director of Environmental Strategy,
Office Depot

The following article provides a framework and practical advice on how to create greener offices within law firms. Many ideas in the article will help a firm achieve the goals of the ABA-EPA Law Office Climate Challenge. By enrolling in this challenge a firm can get recognized by the ABA and potentially by the Environmental Protection Agency (EPA) as well. By achieving certain goals identified in the challenge, the ABA may recognize the firm as a Law Office Climate Challenge Leader. For further details visit www.abanet.org/environ/climatechallenge.

Professional service organizations such as law firms, accounting firms, and consultancies have not historically been thought of as having significant environmental impacts. As purveyors of advice and counsel, they do not manufacture or distribute tangible goods.

However, this reasoning is myopic. Law firms and other professional services firms can have a multitude of direct and indirect environmental impacts: from the products and services they buy, to the everyday commuting and travel of their staff, to the buildings they occupy, and to the waste they generate. Since it is actually *demand* for products, buildings, and fuel that drives upstream environmental impacts, shifting demand to greener alternatives can significantly reduce environmental impacts.

One simple example may help illustrate. Most law firms use a lot of paper. Most of the paper is probably from virgin forests. Most lawyers within the firm more than likely print single-sided. Many firms do not have a fully functioning paper recycling program. Which party should be responsible for the environmental impacts of the paper? The pulp mill? The paper mill? The reseller? The law firm? The waste management company?

As with many environmental matters, the fairest answer is that responsibility for the impact is shared. Each

product has a “lifecycle” of impacts and *all* players along the lifecycle share some of the environmental impacts. Each player also holds a key role in reducing the impacts.

Paper is a useful example for the legal profession because it is one of the most visible and material of the profession’s impacts. And materiality, as the first step in this article argues, is the critical thing to think about for *any* organization wanting to go greener. The rest of the article provides a framework and tangible steps law firms can take to go greener.

Step One: Ask *Why Green?*

Before starting a green program, the most important first step is to do what lawyers are trained to do—analyze the task at hand. For a greening effort, this may be done most effectively with a small “green team” of interested people at every level, across functions. It is useful to include a representative from upper level management (if applicable), and for each respective office, a senior partner, an associate, a paralegal, a facilities person, and an administrative assistant.

The task of this team is to step back and to think about the scope and priorities of the firm’s greening effort. The environment is such a wide-reaching concept that “option paralysis” is often a major barrier to action. If the law firm participates in the ABA-EPA Law Office Climate Challenge Program, priorities may be clarified by the requirements of the program. But whether participating in the ABA-EPA challenge or not, the following fundamental questions can be used to prioritize your efforts.

1. Ask *what* are the firm’s or office’s main environmental impacts? In law firms, common impacts include paper and office supplies purchases, printing, text purchases, technology purchase and use, landfill waste, travel to client meetings, electricity, and new building construction.
2. Ask *where* are these impacts more significant—at the firm’s head office or in regional offices? In certain departments or equally across the firm? Answers to these questions will help you focus on reducing your

most material environmental impacts.

3. Ask *which* environmental issues matter most to the firm? This may be as much a personal question as an organizational one, and there may also be a link between the two: does the firm have a professional interest in energy and climate change? Deforestation and biodiversity? Reducing toxic chemicals? Minimizing waste? The firm's main concerns could drive first actions.
4. Ask *how* does the firm approve or disapprove new programs? Are budgets constrained and cost savings critical or are there opportunities to invest in ideas that deliver returns over time? What is the timeline for payback? Does the firm want to be a green leader irrespective of economic considerations?

Answering these questions can help establish your firm's priorities. The next step is to act. Each of the action examples below focus on the office context, but the principles apply more widely.

Step Two: Buy Greener

Since purchasing drives environmental impacts up the supply chain, buying greener can help reduce impacts all the way up that chain. Once priorities have been clarified, the next step may be to re-allocate purchasing dollars towards:

- "Greener" products...
- that help reduce the environmental impacts most important to the firm...
- while focusing on the highest expense categories...
- in each office or offices where the firm spends the most on these products.

But what is a "greener product"? The Federal Trade Commission (FTC) has published "Green Guides" that explain which products can be described and marketed as environmentally preferable to others (www.ftc.gov).

To simplify the FTC guides, we have highlighted three main reasons one product could be considered "greener" than another over its lifecycle:

1. *Reduced waste and pressure on resources overall*: recycled, remanufactured, rechargeable, and reusable products generally deliver both benefits; wood and paper products from "responsibly managed forests" help reduce pressure on natural habitats; and recycling solutions help divert end-of-life materials from the waste stream.
2. *Reduced fuel, energy, and greenhouse gases overall*: energy efficient, carbon-balanced, locally-sourced, and renewably-powered products deliver these benefits.
3. *Reduced harsh chemicals overall*: certified non-toxic, chlorine-free, bio-based, and biodegradable products generally deliver this benefit.

Depending on the environmental issues most important to the firm, purchasing decisions can be focused on actions most likely to reduce impacts related to those issues. Another consideration is how green does the firm want to buy? Historically "green" has been a binary concept: products have been considered "green" or "not green." But this is a flawed simplification. There is a continuum of green-ness: from not green to light green to dark green. Any product—even if it has just a minor green benefit—is likely "greener" than another without that benefit. The greenest products deliver maximum environmental benefits across the product lifecycle.

Cost and Quality Considerations

A recent Supply Chain Study (The Green Supply Chain, published by CSC, Manhattan Associates and IBM) confirms that concerns about cost justification constitute the most significant barrier to implementing a sustainable supply chain strategy. But while buying green may mean spending more for some products, the reality is that over a "basket of goods" it can be less expensive in the long run to go green at the office.

Don't believe it? Within the office context, calculate how much money is spent on new ink and toner cartridges. By switching to remanufactured cartridges a typical firm can save over 10 percent of what may be a large sum. Remanufacturing helps keep waste out of

landfills and removes the need for oil to create new cartridge shells. The quality of remanufactured cartridges has improved significantly recently—today’s remanufacturing processes result in high quality, guaranteed cartridges that work effectively every day. The second major category of purchasing in law firms is often paper. Since over a third of landfill space in North America is comprised of used paper, buying recycled paper products can help diverted this resource from landfill into new paper products. Just as the quality of remanufactured cartridges has improved, so has the quality of recycled paper products. In some brands, items with 10 percent, 35 percent, 50 percent or even 100 percent Post Consumer Recycled (PCR) content can hardly be distinguished from virgin (non-recycled) paper.

A little known fact is that—as of 2005—nearly 95 percent of the printing and office paper sold in the United States contained 0 percent recycled content, meaning most fiber comes directly from forests. Buying paper products with even a small amount of recycled content helps reduce pressure on forests and diverts paper from landfill. Generally, the higher the PCR content in the paper you buy, the bigger the environmental benefit.

After remanufactured cartridges and recycled paper, the next big category of expenditure in law firms is often binding and filing supplies: folders, binders, and boxes. All of these are now available containing high recycled content—with recycled versions regularly available at lower cost than virgin ones.

In addition to products that feature the benefits of containing recycled content, office products may contain a wider range of other green benefits. Durable and refillable pens and pencils can generally be considered greener than disposable; products from SFI (Sustainable Forestry Initiative) or FSC (Forest Stewardship Council) certified forests can generally be considered greener than products from non-certified forests; biodegradable packaging and dishware can generally be considered greener than Styrofoam. All of these choices help reduce the pressure on resources and can result in less waste.

Another category of products to consider in a quest for a greener firm is technology. Climate change is one of the most significant environmental issues of the day. One main solution to climate change is to use less electricity. Using energy efficient products can lower utility costs and reduce the carbon emissions associated with climate change. Energy Star qualified electronics are readily available and are often in the same price range as non-Energy Star items. Smaller items like laptops or LCD panels also provide green benefits because these products generally draw less energy than larger alternatives.

Finally, switching employee desk-lights to compact fluorescent lightbulbs (CFL) and retrofitting office lighting may represent a very quick and cost-effective way to reduce energy costs and carbon footprints. According to the EPA’s Energy Star Web site (www.energystar.gov), CFL’s last up to 10 times longer than regular incandescent bulbs, can save up to 75 percent of energy costs, and fit most types of light fixtures.

Another way to get a cleaner and greener law firm relates to everyday chemicals. Items that are verified as “non-toxic” with labels such as Green Seal, Ecologo, or “Certified AP Non Toxic,” are made with fewer harsh chemicals than typical alternatives. Cleaning products, highlighters, and glues are more obvious categories, but furniture can also be manufactured with less toxic glues and formaldehyde. SCS Indoor Advantage or Green Guard certification helps assure that furniture in your office has minimal “offgassing” of potentially harsh chemicals and results in comparatively healthier indoor air quality.

Step Three: Be Greener

Buying green means using purchasing dollars to encourage greener products in the supply chain. But “being green” need not cost a dime. To start being greener in the office, consider five simple tips:

Switch off to save: Encouraging employees to turn off lights and computers while not working—day or night—can save energy and reduce utility bills and carbon emissions. By plugging all your electronics into

a power strip—all the office equipment can be turned off in one go.

Drop the disposables: Buying three cups of coffee and three bottles of water a day may not seem like a lot, but over a year's time will result in contributing over 600 cups and 600 bottles to the local landfill. Using a reusable mug for coffee and a glass for water can help reduce waste and resource use and save the firm money.

Think before you print and print double-sided: Legal professionals often have a strong predilection to printing, then filing. Keeping documents electronically not only saves paper but simplifies searching. By printing double-sided you can save up to 50 percent on paper costs. While some of these documents may need to be printed—and printed single-sided—for legal reasons, perhaps a more significant percentage do not. Moreover, if there is concern about how people within the firm will react to the appearance of double-sided printouts, consider if magazines or books had one blank side on every page. While there may be an adjustment period, people will likely quickly get used to printing double-sided.

Recycle everything you can: Recycling programs can be set up for almost every end-of-life material in every office of a law firm. The office facilities manager can work with local waste authorities and shredding firms to recycle recyclable products.

Work to reduce fuel: Working with suppliers also affords opportunities to be green and reduce fuel. Every firm-related purchase triggers a series of activities in the supply chain—nearly all of which require fuel or energy. By consolidating orders or switching to biweekly or weekly delivery schedules for regularly shipped items—such as office supplies—greenhouse gas emissions associated with every day delivery can be reduced.

Step 4: Sell Green

Once the firm's "green team" has decided what to do, one of the realities of green efforts is that organization-wide support is, at least initially, not necessarily

enthusiastic. But "new green" thinking is about not forcing change onto unreceptive audiences, but encouraging small steps in a greener direction without being imposing.

By helping people within the firm see that they can personally benefit from greener office programs, they are more likely to join the efforts than resist it. To "sell green" it is also important to debunk some myths. Running pilots on greener products and developing simple financial models to show how buying green and being green can save money can help convert even the most ardent naysayers.

Step 5: Tell Green

Finally, there is nothing that encourages like positive reinforcement. Telling clients, competitors, and employees about your green programs can help them understand and appreciate them. By celebrating even small wins with communication, events, and press releases, you can create momentum for broader green office efforts.

To really celebrate the firm's achievements, consider creating a Web site or report detailing your progress. The Global Reporting Initiative (GRI) is an international body that creates standards for sustainability reporting. The GRI guidebook can be downloaded at www.globalreporting.org. The firm's green team can work with the GRI guidebook to create a report that meets some or all of these guidelines. To date, relatively few law firms have created such a report—leaving a window wide open for industry leadership.

Yalmaz Siddiqui is the director of Environmental Strategy for Office Depot. He oversees the organization's global environmental strategy to "increasingly buy green, be green and sell green." Part of his job responsibilities includes assisting companies, including law firms, to implement green purchasing programs. More information on how to green your office is available at www.officedepot.com/greenyouroffice. Yalmaz Siddiqui can be reached at yalmaz.siddiqui@officedepot.com.

FROM ABA PUBLISHING AND THE SECTION OF
ENVIRONMENT, ENERGY, AND RESOURCES

Global Climate Change and U.S. Law

Michael B. Gerrard, Editor

Because global climate change presents extraordinary challenges to the environment and the economy of United States as well as those of other nations, the debate about how to effectively implement more climate-friendly policies is sure to continue and amplify. The scientific case for strong action is becoming more compelling every month, and opinion polls show that the American public increasingly agrees. The law will play an important part in developing mechanisms to protect the climate, such as conserving energy, using renewable sources of energy, and implementing emission caps and trading programs.



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