

Environmental Improvement Through Business Incentives

First Edition



GEMI

**Business Helping Business Achieve
Environmental, Health & Safety Excellence**



GEMI

March 1999

Greetings,

A little more than a year ago, the Global Environmental Management Initiative (GEMI) began a process designed to find ways to improve environmental effectiveness, address non-traditional environmental problems, and make the current environmental system more efficient.

The members of GEMI's Incentives Task Force, comprised of corporate environmental professionals from a wide range of businesses, recognized that there was a need for new thinking, approaches and creativity if we are to both improve our environment and the economy. The use of meaningful incentives to encourage voluntary action emerged as a key aspect of any new system.

GEMI initiated a process designed to look at incentives that have worked in government and in the private sector and catalogued the ideas that we collected. We also looked at different problems and opportunities that could be addressed creatively through the use of incentives. We then met with federal, state, environmental and private sector representatives across the country. We incorporated their comments, refined our document and have now completed the First Edition of *Environmental Improvement Through Business Incentives*.

We believe that this document speaks to GEMI's mission of achieving environmental excellence, and providing value to the environment and the bottom lines of our companies.

On behalf of the members of the project that created *Environmental Improvement Through Business Incentives* we hope that you will carefully review the program opportunities and incentives that are described in this document. Assess with us the practicality of our recommendations and share with policymakers your thoughts on how these ideas can provide the environmental performance that all of us want to achieve.

Sincerely,

Susan Moore

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About the Global Environmental Management Initiative

The Global Environmental Management Initiative (GEMI) is a non-profit organization of leading companies dedicated to fostering environmental, health and safety excellence worldwide. Through the collaborative efforts of its members, GEMI promotes a worldwide business ethic for environmental, health and safety management and sustainable development through example and leadership. It should be noted that in this report the term environmental should be understood to include health and safety. GEMI's member companies include:

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Introduction

Environmental regulatory programs are largely mature. Business attitudes toward environmental responsibility have matured as well. Many companies now embrace environmental responsibility and most insist on compliance. Yet, there is more to be done—and more can be done if we supplement the mature programs with new ways to tie together environmental and business performance.

Environmental laws and regulations are always written for the general case and the controls they impose are incremental. If they were written for the maximum control technically possible for the most modern, cleanest operations, many companies would not be able to comply. Yet the better facilities may be able to do a better job than required as a matter of law. For this reason, new approaches need to be added to regulatory agencies' tools for achieving environmental goals. The best performance cannot be achieved by the traditional "command and control" approach. The goal is to find a way to make better performance attractive to those businesses that have opportunities to do better, but are driven to using their financial and human resources to take advantage of other opportunities for making or saving money. General rules help assure that all competitors, at least all of those in the United States, have a level playing field, but something more is needed to get the best from the best.

The Global Environmental Management Initiative (GEMI) initiated the IDEA 21 project to highlight a way to achieve better environmental results than can be obtained through the exclusive use of traditional "command and control" methods: the use of an array of flexible, incentive-based methods of encouraging superior environmental performance. IDEA 21 stands for "incentives, disincentives, environmental performance and accountability for the 21st Century." The project's goal is to offer fresh thinking about how cooperative policies that reward continuous improvement in environmental performance can be used to improve upon our current system of environmental regulation.

The IDEA 21 project is an outgrowth of three reports that GEMI produced last year covering the following topics:

- A study of corporate management responses to different environmental incentives;
- A review of voluntary incentive-based programs at the federal level; and
- A review of selected incentive programs in the states and internationally.¹

Collectively, these reports demonstrated that there are opportunities to use incentives to enhance environmental performance, but that effective incentives have been employed only sparingly in this country. The IDEA 21 project is now working to identify specific incentive-based policies that can be adopted by local, state and federal agencies to reward improved environmental performance.² The project's goal is to make such information available to government decision-makers who might consider using incentives to obtain better results from their environmental programs.

The product from this new effort are the two tables included in this report. The first of these tables identifies and summarizes several environmental objectives that can be advanced through the use of incentives. The second table identifies and summarizes several options for voluntary environmental incentives. Both of the tables are intended to give policymakers ideas on the type of incentive mechanisms that can be deployed and the type of environmental improvements that can be achieved through the use of such incentives.

¹ Yosie, Terry F. and Timothy D. Herbst, *Corporate Environmental Health and Safety Practices in Transition*, Davies, Terry and Jan Mazurek, *Industry Incentives for Environmental Improvement: Evaluation of U.S. Federal Initiatives*; Beardsley, Daniel P., *Incentives for Environmental Improvement: An Assessment of Selected Innovative Programs in the States and Europe*. 1996. These reports can be ordered by contacting GEMI at 202-296-7449 or through the GEMI web site at <http://www.gemi.org>.

² In this report the term "environmental" refers also to health and safety.

What Is a Voluntary Environmental Incentive?

For the purpose of GEMI's work, a voluntary environmental incentive is any domestic or foreign government program or policy that rewards a company (or other entity) for making a voluntary environmental improvement.³ Voluntary improvements can be embodied in laws or regulations or can be stand-alone programs. This reward may be in the form of a tax incentive, a reduction in regulatory costs or any other tangible, financial benefit.

The Need for a Wide Range of Incentives

In order to achieve the desired result, an incentive must match a business' needs (or those of other regulated entities, such as a publicly owned treatment works). Because the needs of businesses vary, it is crucial that there be a variety of incentives available. For some types of businesses, speed to market is critical. They need a way to avoid the delays associated with environmental administrative processes. Others may be most driven by costs and need a way to achieve savings. In cyclical businesses, an incentive that is not attractive at one point in the business cycle may well be attractive at a later date. Smaller businesses may need different incentives than large companies. These are just examples. The key point is that a wide range of incentives is needed to address the incredible variety of industries and even companies within industries that are affected by today's sweeping environmental rules.

The Role of Stakeholders in Incentive Programs

GEMI member companies are committed to actively involving community members and other stakeholders in our environmental programs. The development and implementation of many types of incentive options will both need and benefit from the active involvement of a broad spectrum of stakeholders. In particular, those incentive options that modify existing regulatory requirements for a company or facility will necessarily demand such stakeholder participation. Because GEMI's purpose at this stage in the project is to gather feedback on the potential effectiveness of incentives, we specifically address community or stakeholder involvement in describing potential incentive options. However, we assume that transparency in process and genuine opportunities for stakeholder involvement are given in any incentive program.

Environmental Benefits Through the Use of Incentives

The following table identifies several environmental program objectives that can be achieved through the use of incentives. These program objectives range from encouraging the reduction in specified pollutants to improving the deployment of program resources within an environmental regulatory program. Note that it will always be up to the governmental decision-maker (with input from stakeholders of all kinds) to decide the amount of program benefit that is needed to balance the benefit to the company receiving an incentive. As with companies, different programs, different areas or different times may change this balance. In some cases, a regulator may want to use incentives to address the most pressing problems (e.g., air, water) in the area in question. In other cases, freeing up enforcement or permitting resources to be used in more productive activities may be a critical consideration. How much of a given benefit the agency (or the environment) must receive to warrant granting a given incentive will be very much a case-by-case determination. Specific examples and contact points for existing programs in these categories can be found in Attachment 1.

³ This report refers primarily to "companies" when describing incentive programs. Such programs however can be equally as effective for other regulated entities such as municipalities, special districts and other non-business entities.

Environmental Benefits Through the Use of Incentives	
Program Objective	Environmental Benefits
<p>1 Increase level of pollution prevention</p>	<p>At the federal and state level, many programs are in place to encourage businesses to voluntarily undertake pollution prevention projects. These programs, combined with the potential process efficiencies and cost savings attributed to pollution prevention projects, have resulted in real pollution prevention gains. However, many smaller companies lack the technical expertise and resources to implement pollution prevention projects. In addition, many larger companies have already made significant reductions and are finding it harder to identify and justify pollution prevention projects in which the marginal financial benefit of the reduction exceeds the marginal cost of the project.</p> <p>Therefore, there is growing evidence that the rate of pollution prevention has slowed. Incentives offer a means to promote additional pollution prevention while retaining the voluntary nature of most pollution prevention programs. Incentives can be used to encourage the purchase of pollution prevention-related equipment or to encourage the meeting of specified pollution prevention goals.</p>
<p>2 Reduce releases of regulated pollutants</p>	<p>Air and water emissions of various pollutants are currently controlled under a variety of state and federal (and sometimes local) regulations. Larger sources are controlled through permits issued under the Clean Air Act (Title V permits) and the Clean Water Act (NPDES permits) as well as through pretreatment requirements enforced by local sewer agencies.</p> <p>While these command and control programs have been effective in significantly reducing releases into the air and water, incentive programs offer the opportunity to cost-effectively encourage additional beyond-compliance reductions in such pollutants as volatile organic compounds (VOCs), nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), particulate matter and various toxic pollutants.</p>
<p>3 Reduce releases of non-regulated pollutants</p>	<p>Some pollutants are not controlled under existing regulations, notably carbon dioxide and other global warming gases. In addition, some facilities are not required to reduce emissions of certain pollutants, even though these pollutants are controlled at other facilities. Oftentimes, the lack of regulation is due to concern over the economic costs of imposing command-and-control requirements for these pollutants or for certain types of facilities. Incentives offer the opportunity to promote reductions in non-regulated pollutants without the need for extensive regulatory development and, where needed, the legislative authority required for new command-and-control regulations.</p>

Environmental Benefits Through the Use of Incentives	
Program Objective	Environmental Benefits
4 Reduce non-point source water pollution	Non-point source pollution, including run-off from both urban and rural sources continues to pose challenges for improving water quality. Because of the diffuse nature of non-point source pollution, the problem does not lend itself as well as other types of pollution to the application of command-and-control programs. Accordingly, the use of incentives provides the opportunity to encourage improvements in pollutant loading from non-point sources without the program resources required to implement a formal regulatory program.
5 Decrease consumption of natural resources	Incentives can be (and are) used to encourage companies and other entities to decrease their energy and water usage as well as their consumption of other products. A variety of energy incentive programs are already in place, offering rate discounts for reduced energy usage administered either through the U.S. Department of Energy (DOE), EPA or individual electric utilities. Similar programs have been used in the water area and are likely to continue to expand as these have traditionally been
6 Provide regulatory compliance assistance to small businesses	Almost all businesses, regardless of their size, have difficulty tracking changing regulatory requirements. Small businesses, with their limited staffs, often have an even more difficult time developing a detailed understanding of their regulatory obligations. In addition, given the large number of small businesses, traditional environmental enforcement programs involving time-intensive inspections and other forms of compliance monitoring are not always feasible. Therefore, states and localities often look for more innovative mechanisms to increase the rate of compliance among small businesses. Achieving this, without adversely impacting the economic viability of such operations is an increasingly important goal of many state and local environmental programs.

Environmental Benefits Through the Use of Incentives	
Program Objective	Environmental Benefits
<p>7 Encourage the use of voluntary environmental management systems</p>	<p>There is a growing understanding of the basic management elements that make up an effective voluntary corporate environmental management program. When these elements are in place, companies are more strongly positioned to achieve 100 percent compliance and to remain consistently in compliance. Such systems are also the essential elements to move companies beyond compliance and to promote overall risk reduction. Most major companies have many of the elements of a strong environmental management system already in place, but could improve these systems in particular areas. Small and medium-sized businesses may be less likely to have effective management systems in place and could improve environmental performance through the implementation of improved systems.</p>
<p>8 Encourage voluntary cleanup and redevelopment of such projects</p>	<p>Finding ways to encourage the cleanup and redevelopment of vacant industrial properties (i.e., brownfields) has become an important public policy objective in the United States. Bringing such properties back to productive use can provide both environmental and economic benefits. Despite progress in the pace of contaminated brownfields redevelopment, many jurisdictions still face obstacles in effectively redeveloping properties on a widespread basis. Primary obstacles to increased redevelopment often include a lack of project financing and the fear of future liability. Incentive programs have the potential to address both of these obstacles.</p>
<p>9 Decrease the time required to issue permits without increasing program resources dedicated to permitting or affecting the quality of the permits</p>	<p>The issuance of permits is a primary mechanism used by regulatory agencies to establish and enforce specific regulatory standards. The process of issuing site-specific permits, however, is resource intensive and in some instances may take months or years to complete. Many of the incentive options included in the incentives table below facilitate the more swift issuance of permits without sacrificing the quality of the standards contained in such permits.</p>

Environmental Benefits Through the Use of Incentives	
Program Objective	Environmental Benefits
<p>10 Maximize the effectiveness of program resources for compliance monitoring and enforcement</p>	<p>Traditional environmental regulatory programs usually rely on detailed facility inspections as the primary mechanism for ensuring and encouraging compliance with regulatory requirements. On-site compliance inspections, however, require significant staff resources on the part of the public agency. Given the large number of regulated entities, particularly as more small businesses are covered by regulatory requirements, conducting traditional on-site inspections becomes a less effective means of ensuring broad-based compliance, as only a small fraction of facilities can be visited each year. In addition, on-site inspections often provide only a “snap-shot” of a facility’s compliance status, as opposed to an assessment of a facility’s ability to consistently remain in full compliance.</p>
<p>11 Encourage the use of innovative remedial and pollution control equipment technologies</p>	<p>Important advances continue to be made in both technologies to remediate past contamination and control technologies and production processes which reduce releases of pollutants. However, businesses are often risk-averse when it comes to pursuing new technologies for which there is only limited operational experience and, more importantly, which may not definitively meet existing regulatory obligations. Incentives may offer the opportunity to encourage more companies to pursue advanced technologies, thereby improving their overall environmental performance as well helping facilitate the wider acceptance of such technologies.</p>
<p>12 Increase the global consistency of EHS practices</p>	<p>As the trend toward globalization continues and as the barriers to restricted trade are reduced, it has become increasingly important to promote greater consistency in the environmental policies and practices of both governments and multinational corporations. However, regulatory structures and enforcement resources vary widely among different countries. It is therefore difficult to promote such consistency solely through command-and-control regulatory structures. Voluntary incentives can play an important role in encouraging consistency and improved environmental performance in those countries without well-developed regulatory structures.</p>

Environmental Benefits Through the Use of Incentives	
Program Objective	Environmental Benefits
<p>13 Increase purchase of recycled materials</p>	<p>Creating a stronger demand for recycled products is the key component in developing self-sustaining recycling markets for a wide variety of products. While many companies have developed procurement policies that encourage the purchase of recycled products, many of these policies include price restrictions such that recycled products are only purchased if their price does not exceed the price of virgin products by a specified amount.</p> <p>Such price sensitivity continues to hamper the development of strong recycling markets and the ability of recycled products to compete with products made from recycled materials. Many of the incentive options listed in this document can effectively be used to encourage companies and other entities to increase their purchases of products made from recycled materials.</p>
<p>14 Improve environmental performance throughout the supply chain</p>	<p>While the environmental performance of many larger companies has improved dramatically in recent years, continued improvement will come in great part by improving the environmental relationships between these companies and their suppliers, customers and contractors. The current regulatory structure primarily emphasizes the individual performance of specific operating units. It does not, therefore, encourage links throughout a supply chain to work cooperatively in reducing the environmental impacts associated with the entire product and distribution cycle. Voluntary incentives can be used to fill in this gap in the regulatory system by encouraging companies to work with their suppliers, customers and contractors.</p>

Environmental Incentive Options

The following table provides a listing of various incentive options. Once again, it is important to bear in mind that a menu of incentives is needed to address the wide variety of businesses (or other regulated entities) with their varying and changing needs.

Incentive options are divided into five categories as follows:

- (1) permit incentives;
- (2) product review and approval incentives;
- (3) other regulatory incentives;
- (4) tax incentives; and
- (5) capital incentives.

For each incentive option information is provided on who would grant or enact the incentive and if and how such an incentive mechanism is being used today. It is important to note that these options are not necessarily mutually exclusive. For example, a permit incentive program might include automatic permit extensions, expedited review time and consolidation; each of which are presented as separate options in the table that follows.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Permit Incentives			
15 Permit extensions	EPA and state environmental agencies (may also need legislative authority)	Existing permits under RCRA, CAA and the CWA must be renewed on regular schedules (i.e., five to 10 years). The Colorado Environmental Leadership program allows the life of environmental permits to be extended from five to 10 years to the degree allowed by law. Permit extensions are also being considered in several of the Project XL pilots.	Allow for the automatic extension of permits for companies meeting specified environmental criteria.
16 Expedited permitting	EPA and state environmental agencies	Many states are trying to implement reforms to expedite the permitting process. Many of these programs involve “one-stop” permitting centers and other forms of additional technical assistance to speed the process. Mississippi has designed a program that assigns a single contact for the permitting process and requires this contact and a representative of the company to sign a non-enforceable agreement committing the state to process the permit under a defined time-frame, if the applicant submits the necessary information.	For qualifying companies the permitting agency would commit to processing the permit and completing the permit process in an agreed-upon time-frame (e.g., agree to review and respond to permit applications within 60 days or less following complete application submission).

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Permit Incentives			
17 Increased permit flexibility	EPA and State environmental agencies	Operational flexibility under permits (particularly Clean Air Act permits) has been at the center of several regulatory initiatives. In particular, several of the Project XL initiatives involved more flexible permits. For example, the Intel XL project involved the waiving of new permitting requirements for new construction or other plant modifications at the company's Chandler, Arizona facility in exchange for a facility-wide air emissions cap and other environmental commitments. Similarly, the Weyerhaeuser XL project caps the facility's emissions at current actual emissions plus a level less than that which would trigger a review under the PSD program. In exchange, the company is allowed to make any operational changes under that cap without notifying the Agency. ⁴	Several options exist for increasing permit flexibility: <ul style="list-style-type: none"> • Allow qualifying facilities to operate under a single emissions cap covering all sources within the facility. The cap would be equal to baseline emissions. • Allow qualifying businesses to operate under a cap for several different sources within a facility. • Allow qualifying businesses to undertake specified changes to business operations without triggering a permit renewal.

⁴ Note that the Weyerhaeuser XL project also includes a separate cap on four additional pieces of equipment which are allowed to operate at their design capacity without triggering PSD review. This cap does not allow significant equipment modifications.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Permit Incentives			
18 Multimedia permitting	EPA and State environmental agencies	Issuing a single permit under air, water and waste regulations has also been the focus of several regulatory reform initiatives. The Printing Subcommittee of the Common Sense Initiative is developing a model multi-media permitting program for the printing industry. The XL project for Jack M. Berry, Inc. in Florida proposes to replace existing permits with a single “Comprehensive Operating Permit.” The advantage of a multimedia permit is that it may reduce overlap in requirements (e.g., reporting), reduce overall permit processing time and simplify the permitting process.	Allow qualifying facilities to replace existing media-specific permits with a single multi-media permit.
19 Providing single permit contacts	State environmental agencies	Another simple mechanism for improving the permitting process is for permitting authorities to assign a single contact to serve as the point person for all of a facility’s media-specific permits (air, water and waste). Mississippi, for example, is re-designing its permitting program and will assign a single Senior Permit manager for all of a facility’s permits.	Assign qualifying facilities a single permit representative who will facilitate all of the facility’s permitting and will have sufficient time available to ensure that permits can be processed in a timely fashion.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Permit Incentives			
20 Certification in lieu of environmental permits	Congress, EPA, state legislatures, state environmental agencies	<p>The most far-reaching permit reforms (and potentially the reforms that could provide the greatest incentive to companies) involve replacing the labor-intensive permitting process altogether with self-certification programs. Perhaps the best example of such a program is the Massachusetts' Environmental Results Program (ERP). Under the ERP, facilities will no longer be issued State permits.</p> <p>Instead, a facility will commit to a specified level of environmental performance and then report or "certify" annually on their compliance with these standards. Instead of focusing on issuing permits, Massachusetts DEP will establish standards, conduct inspections to ensure the accuracy of a company's certification and take enforcement actions against those who failed to perform or have falsely certified.</p> <p>Note that the program only applies to permits under state law, not federally based permits (i.e., CAA, NPDES or RCRA permits). Federal statutory changes would likely be required to apply the concept</p>	Pursue the wider adoption of the certification concept by other states and by EPA. Eligibility for participation in the certification program would be contingent on either meeting a general definition of environmental excellence or commitments to specified reductions in releases.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Product Review/Approval/Sales Incentives			
21 Expedited review of products under FIFRA	Congress and/or EPA	All new pesticides must be registered under the FIFRA program. Pesticides registered prior to 1984 must be re-registered. The new Food Quality Protection Act establishes a goal of re-reviewing pesticide registrations on a 15-year cycle. The new law also provides for the expedited review of “safer” pesticides.	Provide priority registration or re-registration attention for qualifying companies. The review would be based on the same criteria and thoroughness, but the Agency would provide more staff resources to expedite the review for qualifying companies.
22 Expedited PMN review under TSCA	Congress	EPA currently provides for an expedited review for low-volume, test-marketing or low exposure chemicals. EPA also offers a self-implementing review for polymers. Few have taken advantage of the polymer process because the process does not allow the substances to be placed on the TSCA inventory, which customers prefer.	Provide for an expedited review (45 days instead of 90 days) for submissions by companies that demonstrate environmental excellence or provide more or better data and risk analyses.
23 Expedited review of new products by FDA	Congress and/or FDA	The Food and Drug Administration (FDA) currently reviews a variety of products (including pharmaceuticals and medical devices) prior to allowing such products to be distributed. Complying with and meeting FDA criteria through this approval process is a key “time to market” issue for many businesses. Hence, an expedited review process would be a strong incentive to encourage environmental improvements.	Provide for an expedited review (without changing the quality of the review) of products from companies meeting specified environmental criteria or provide more or better data and risk analyses.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Product Review/Approval/Sales Incentives			
24 Expedited review of new alternatives under the SNAP program	Congress and/or EPA	Under Section 612 of the Clean Air Act, EPA must identify acceptable alternatives to CFCs, halons and other ozone depleting substances. Under the Significant New Alternatives Policy (SNAP), manufacturers of substitutes must submit data covering a wide range of physical and chemical information and information on the substance's use and benefits. EPA has 90 days in which to review and approve the chemical as an acceptable alternative. (Note: this review is conducted in addition to the PMN review).	Provide for an expedited SNAP review (45 days instead of 90 days) for submissions by companies that demonstrate environmental excellence or provide more or better data and risk analyses.
25 Preferred vendor status	EPA or state environmental or other procurement agencies	The Colorado Environmental Leadership proposal includes an incentive option that would grant qualifying companies "preferred status" in competitive bidding to provide the state government with products or services. U.S. EPA and many state governments have incorporated environmental factors in the specifications for the procurement of various products (e.g., recycled paper content; re-refined used oil; energy efficiency standards). The extension of such preferences to the overall environmental performance of a company has not been widely tested.	State or federal procurement or contracting standards would be modified to provide a preference for companies that demonstrate environmental excellence (e.g., demonstrate a reduction in releases or the adoption of superior environmental program elements).

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Other Regulatory Incentives			
26 Consolidated or streamlined reporting	EPA and state environmental agencies	Several efforts are underway to streamline environmental reporting. Several of the Common Sense Initiative projects involve streamlining and consolidating reporting (computers and electronics sector, iron and steel sector, metal finishing sector).	Propose a streamlined and consolidated reporting option for companies adopting one or more environmental excellence
27 Reduced inspection schedules	EPA and state environmental agencies	The OSHA Voluntary Protection Program (VPP) is the best current example of a voluntary program that rewards participants through reduced inspections. Under the VPP, companies that demonstrate superior safety performance (e.g., have to be below national average injury rates for their industry) and have various management and safety program elements in place are eligible to be designated “Merit” or “Star” facilities. Following an initial on-site evaluation, facilities that qualify are not subject to annual compliance inspections (but are subject to injury related inspections). On-site reviews of their programs are conducted every three years.	Establish a national program similar to the OSHA VPP for the environment. Participating facilities would be required to demonstrate an exemplary history of compliance as well as demonstrate an overall record of environmental excellence. If the facility qualifies, it would not be subject to regular inspections (e.g., RCRA, TSCA inspections). The company would instead be subject to a program review (either conducted by the Agency or a self-review) every three years in order to certify that it meets the required criteria. If the Agency became aware of a compliance violation during this period (e.g., a release, an emission exceedance) it would retain the right to conduct an inspection.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Other Regulatory Incentives			
28 Extension of compliance deadlines	EPA and/or state environmental agencies	<p>Complying with changes in environmental regulations often requires significant investments by companies to conduct compliance testing, to initiate the permitting process and to install new pollution control equipment. The ability to defer such investments can provide a significant environmental benefit and can therefore be used as an incentive to encourage superior performance.</p> <p>As an example, EPA's new air standards and effluent guidelines for the pulp and paper industry (known as the "cluster rule") include an innovative initiative known as the Voluntary Advanced Technology Incentives Program. Under the program, paper mills that plan to install advanced technologies which reduce discharges beyond the requirements in the new regulations, can defer their compliance time for both the air standards and the water discharge permit limits.</p>	Expansion of programs similar to the Voluntary Advanced Technology Incentives Program to other new rulemakings under the Clean Water Act and Clean Air Act and authority for the states to do so.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Product Review/Approval/Sales Incentives			
29 Small business assistance program through state or regional trade associations	Congress, or EPA, or state and local environmental agencies	Most environmental agencies currently operate technical assistance and compliance outreach programs for small businesses. Oftentimes, however, the effectiveness of these programs is hampered by the mistrust small business owners may have of government regulators (whether valid or not) and by the lack of intimate knowledge environmental agencies may have of specific types of small businesses. Small businesses are often more comfortable receiving information and guidance from their state or local trade association and many rely on their trade associations for much of their current regulatory information and assistance.	State environmental agencies could transfer current funding for technical and regulatory assistance to local or regional trade associations. Trade associations might use this funding to establish regulatory hotlines, develop guidance documents or establish training programs for their members. Federal government could provide funding to the states to encourage such action

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Tax Incentives			
30 Improve depreciation allowances for environment-related expenditures	Congress and/or state legislatures.	<p>The current federal tax code (Sec. 169) allows for the amortization of “certified pollution control facilities” over a five-year period. At the time of enactment, this provision was a relatively strong incentive as typical amortization would be 10 to 20 years. Now, absent Sec. 169, amortization under the MACRS system would be seven years for many types of equipment. Also, the plant must have been in operation before 1976 to be eligible.</p> <p>A “certified pollution control facility” is defined as a new, identifiable treatment facility used as a means of abating or controlling air or water pollution by removing, altering, disposing of, storing or preventing the creation or emission of pollutants, contaminants, wastes or heat. In addition, the pollution control facility cannot significantly change the nature of the manufacturing or production process at the facility (i.e., expand capacity, change nature of production process, extend useful life or reduce operating costs).</p>	<p>Modify current depreciation provision for “certified pollution control facilities” as follows:</p> <ul style="list-style-type: none"> • Amend Sec. 169 to allow for significantly more accelerated depreciation (e.g., 50 percent first year and 25 percent second and third years). • Expand definition of “certified pollution control facility” to include a broader range of capital improvement projects, if those projects can demonstrate pollution prevention benefits. For example the current restriction on capital improvement projects that change the nature of the manufacturing process would be eased if the project can demonstrate a significant reduction in releases. • Change eligibility requirements to include plants constructed after 1976.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Tax Incentives			
31 Improve tax treatment of remedial expenses	Congress and/or state legislatures and/or IRS	IRS policy on which remedial related expenses can be deducted (i.e., “expensed”) and which must be capitalized has changed in recent years. In the past IRS policy significantly restricted the ability to expense many remedial costs. The IRS substantially reversed this policy in 1994 (IRS Revenue Ruling 94-38) by allowing certain types of remedial costs to be deducted (e.g., the cost of removing contaminated soil or the cost of operating a groundwater treatment facility), while requiring that other costs be deducted (e.g., the cost of constructing a groundwater treatment facility). The ruling, while beneficial, has been interpreted rather narrowly. For example, it is unclear whether the costs of other types of remedial activities are deducted (e.g., installing groundwater monitoring wells, removing Underground Storage Tanks (USTs) or other remedial expenses that provide value beyond the tax year in question) are deductible.	Expand current IRS policy to allow (as an option) the deductibility of all remediation-related costs in the year in which they occur. Under this option, companies would not have to distinguish between costs that continue to provide benefits beyond the year in which they occurred and other costs. All remedial costs would be fully deductible. (This option could be limited to voluntary cleanups.)

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Tax Incentives			
32 Corporate income tax credits for pollution prevention	Congress and/or state legislatures	No federal environment-related income tax credit currently exists. Some attempts at providing income tax credits have been implemented at the state level. Delaware awards a tax credit to manufacturers who reduce Toxic Release Inventory (TRI) releases by 20 percent or other waste by 50 percent. The credit amount is \$400 for each 10 percent reduction and is provided over a five-year period. Minnesota passed an income tax credit of 5 percent of the costs of equipment used primarily to reduce waste. The credit was rarely used and was removed as part of an overall tax simplification effort.	Provide for income tax credit for either reductions in pollutants (TRI releases or hazardous or industrial waste) or for companies committing to one or more environmental excellence program elements. If the tax credit is based on a reduction in releases, the tax credit could rely on a formula that considers (a) the percent reduction from a baseline year, (b) the absolute amount of pollution reduced and (c) the size of the
33 Variable income tax rate tied to reduction in releases	Congress and/or state legislatures	No existing examples.	Adjust corporate tax rate depending on percentage of pollution reduction beyond a compliance baseline. The proposal would be revenue-neutral as decreases in the tax rate would be offset by increases in tax rates for company's achieving no reductions. Applying this to Superfund related taxes might be particularly appropriate.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Tax Incentives			
34 Corporate income tax credit for hiring EHS employees	Congress and/or state legislatures	There are no existing environment-related employee tax credits. However, many states and localities offer employment tax credits as economic development incentives. As an example, through the federal enterprise zone program, Missouri offers a tax credit of up to \$1,600 per new employee hired in an enterprise zone. Outside enterprise zones, the State offers a \$75 to \$100 tax credit for each new job. At the federal level, the new "Work Opportunity Tax Credit" provides a tax credit for companies hiring "hard to employ" workers. The credit is worth 35 percent of the first \$6,000 in wages paid during the first year of employment.	Offer a tax credit for companies hiring employees whose responsibility is predominantly (e.g., 75 percent or more) devoted to environmental, health and safety issues. The tax credit would be phased in over two years to ensure that employees were retained. If deemed appropriate by the relevant legislature or agency, the tax credit could be limited to small business only.
35 Waiver of sales tax for environment-related purchases	State legislatures	Several states currently waive all or part of the sales tax on the purchase of pollution control equipment (Alabama, Idaho, Maine, Michigan and others).	Waiver of all or part of the sales tax on the purchase of pollution control equipment, recycling equipment or equipment contributing to a pollution prevention project.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Tax Incentives			
36 Property tax abatements	State legislatures or locally elected bodies	<p>Many state and local governments promote economic development through the use of property tax abatements to encourage companies to site or expand facilities in their regions. Several states have exemptions for property tax for property dedicated to pollution control (e.g., wastewater facilities, air control equipment).</p> <p>To GEMI's knowledge the single example of a broader environment-related property tax abatement program was in place in Louisiana from 1990 to 1992. The program included a sliding scale of property tax exemptions depending on the score a company attained on an "environmental scorecard." This scorecard was based on the company's past environmental record and on the amount of emissions generated per employee.</p> <p>Companies scoring high enough were eligible for complete property tax exemptions. Data from the program's two years of existence indicated that companies both improved performance and received considerable tax relief. However, prior to the program, virtually all companies were receiving a 100 percent tax exemption. The program therefore represented an increase in taxes and was subsequently terminated.</p>	<p>Adopt a sliding scale of property tax exemptions for companies demonstrating superior environmental performance. Companies would be able to choose from a series of environmental excellence program elements. The more of these program elements a company commits to, the higher the percentage of total property tax relief.</p>

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Capital Incentives			
37 Low-interest loans	State legislatures	Many states and localities offer low interest loan programs to finance the purchase of pollution control equipment and/or undertake pollution prevention projects. Many of these programs are aimed exclusively or primarily at small businesses. One of the drawbacks in many such programs is that they apply only to add-on pollution control equipment and not for more fundamental modifications in a businesses operations. For example, many dry cleaners operate older cleaning units. Replacing these units would reduce emissions while also improving productivity. However, many loan programs preclude the use of loans for the purchase of such equipment.	Promote the expansion of such programs to more states and localities as well as an expansion of federal “seed money” to begin state or locally based loan programs. In addition, allow for the application of the loan program to offset some or all of the capital purchases that improve production as well as reduce emissions.
38 Interest subsidies or credit enhancements	State legislatures	Offering government subsidies to lower the interest rates from private lenders (or reduce the risk of such loans) for environmental projects (i.e., purchase of pollution control equipment or pollution prevention projects) can be a more effective and efficient method of making capital available to companies, particularly small businesses. California, for example, runs a Capital Access Program in which the state, the lender and the borrower all contribute to a reserve fund designed to cover losses from a portfolio of loans under the program. The reserve fund effectively reduces the risk associated with private loans to companies for environmental related projects.	Promote the expansion of such programs to more states as well as promote the use of federal “seed money” to begin such programs.

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Capital Incentives			
39 Tax-exempt bond financing	Congress	<p>Companies currently may issue tax-exempt “private-activity” bonds to finance the costs of constructing certain facilities. Three types of environmental facilities are eligible for tax-exempt financing. These include sewage facilities (defined as wastewater treatment plants meeting certain criteria), solid waste disposal facilities and qualified hazardous waste facilities (e.g., incineration and secure disposal). These tax-exempt, private-activity bonds are subject to an annual state volume cap of \$50 per capita or \$150 million per state (whichever is greater).</p> <p>This cap significantly limits the amount of the bond that would otherwise be issued. In many states, the demand for the bonds far exceeds the cap. Therefore, many companies are unable to take advantage of this financing. Prior to the Tax Reform Act of 1986, tax exempt bond financing was also available for air pollution control and a broader range of wastewater treatment facilities. The Tax Reform Act of 1986 also eliminated the opportunity to apply accelerated depreciation to capital investments financed through tax-exempt bonds. Therefore, companies using tax-exempt financing are precluded from using the accelerated depreciation for pollution control facilities.</p>	<p>Expand the scope of eligible environmental facilities to include air pollution control projects, additional water pollution control facilities, process improvements with direct environmental impacts (e.g., installing new production equipment that results in reduced releases), reclamation or recycling facilities and remediation-related facilities (e.g., groundwater treatment units).</p> <p>Eliminate or increase the annual volume cap available for environmental “private-activity” bonds.</p>

Environmental Incentive Options			
Type of Incentive	Who Would Enact	Current Application	Proposed Option
Capital Incentives			
40 Credits to off-set future environmental payments	EPA and state environmental agencies (may also require legislative authority)	<p>One of the incentives in the Colorado Environmental Leadership proposal is the awarding of dollar credits to entities that participate in the program. The credits can be used to off-set any future obligations of the entity to the state environmental agency, excluding fines and penalties.</p> <p>The credit amount is based on a percentage of the total dollars spent on the various elective program elements adopted by the company (e.g., money spent on developing customer environmental awareness program, developing an annual environmental performance report and various other actions specified in the proposal). The credit is capped at \$10,000 over a three-year period.</p>	<p>Provide dollar credits to offset future obligations with state environmental agencies to entities that either commit to reductions in releases or to adopt one or more environmental excellence program elements.</p> <p>Credit amount could be based on percent reduction from baseline releases or on the number of environmental excellence program elements adopted.</p> <p>The credits could also be transferred (sold) to another entity as long as the receiving entity was also a participant in the program.</p>
41 Grants	Congress and/or state legislatures	Direct grants are also sometimes used for pollution control equipment projects. The high public cost limits the use of such programs.	Promote expanded use of grants for equipment purchases, pollution prevention projects and EHS training.

Role of Incentives in Improving Environmental Performance

The traditional approach to environmental regulation in the United States has primarily relied upon the issuance of detailed, media-specific regulations that govern virtually all aspects of a company's environmental performance. Regulatory agencies, both state and federal, enforce these regulations through resource-intensive, on-site compliance inspections, and formal enforcement actions, such as Notices of Violation, compliance orders and civil and criminal penalties. Many companies have responded to this system by investing significant resources in pollution control equipment, large environmental compliance staffs and the development of environmental management systems to ensure on-going compliance with myriad regulations. The current command-and-control approach has been successful in many areas. In particular, the United States has witnessed dramatic improvements in air and water quality and in the overall management of hazardous wastes.

This success, however, is not perfect. Considerable resources, both private and public, are expended to develop, comply with and enforce environmental standards. EPA's 1998 budget is \$7.4 billion.⁵ According to the Department of Commerce, private industry annually spends over \$100 billion dollars on pollution control and related services. While a good portion of these private expenditures are a necessary part of improving our nation's environmental performance, it is generally acknowledged that there are significant inefficiencies in these expenditures. Examples of these inefficiencies include overlapping requirements; regulations that restrict companies from using alternative technologies that are as effective, yet less expensive; and slow permit processes that can keep companies from expanding their operations or updating their product offerings. In addition to its inefficiencies, the current system is uneven in its application, over-regulating certain sources of pollution and under-regulating others. Similarly, the enforcement of environmental requirements has been uneven. Some industries have felt the brunt of state and federal inspection and enforcement activities while others have escaped such scrutiny. Consequently, there is considerable room to improve the current system and achieve the same, if not better, environmental performance at a lower cost.

In addition, while most companies have made vast strides in their environmental performance, not all have excelled equally. The barriers to improved environmental performance vary depending on the size and nature of the company. For example, smaller companies are often unable to take advantage of the economies of scale that are available to larger companies when implementing environmental programs. Unfortunately, there still are companies constrained by a management culture that does not emphasize environmental performance. In addition, EPA and state environmental agencies often have insufficient resources to provide the compliance outreach and support needed by the large number of small and medium-sized businesses. Even among larger companies, the environmental performance of different facilities within a company often varies widely. Some of the largest companies with the best overall environmental records in the United States may continue to operate facilities in which there remains considerable room for cost-effective improvements.

⁵ Budget of the United States Government, Fiscal Year 1998.

Finally, there remain some environmental problems where more traditional regulatory approaches appear inadequate. In particular, problems in which the sources are a large number of diffuse activities usually do not lend themselves to prescriptive “command and control” regimes. Urban runoff is a prime example, as is the emission of greenhouse gases. The current regulatory system, with its emphasis on detailed rule development, compliance inspections and enforcement is unlikely to be successful in addressing such problems.

A strong dose of environmental incentives is not the cure for all of the system’s current ills. Incentives can, however, aid in each of the areas described above. Because incentives rely on the market to drive performance, they can help bring about environmental improvements at a lower cost (both public and private) and at a faster rate than prescriptive regulations. Incentives encourage companies to make environmental improvements while offering them the flexibility to find the most cost-effective means of achieving this goal. Incentives are also an effective means of encouraging improvements among small and medium-sized companies, as these are the companies most likely to respond to the potential financial benefits inherent in many incentive options. Finally, incentives may offer a cost-effective opportunity to address more intractable problems, like urban runoff, by reducing reliance on traditional resource-intensive inspection and enforcement programs.

Different Incentives Appeal to Different Companies

In developing the various incentive options included in this report, GEMI contacted numerous companies to receive input on which incentives have the greatest appeal and would be most likely to encourage a company to undertake a voluntary environmental initiative. The companies we consulted also included GEMI members, which are primarily large, global companies, as well as representatives of small and medium-sized businesses. The companies also included a range of business sectors, including oil and gas, chemical, pulp and paper, consumer products, electronics, and energy. This process included a formal survey of GEMI members to gauge the appeal of different incentive options. As a result of this process it became abundantly clear that no single incentive or even group of incentives appeal to all companies. Companies, even within the same sector, appear to respond very differently to the incentives included in this report.

Generally, the following factors appear to be important in determining which incentives are most likely to be effective with different companies:

- **Company size.** Smaller businesses appear to respond more to marginal changes in taxes. In addition, access to capital is often important for small businesses and therefore, incentives that provide capital at a reduced rate are often appealing. In addition, incentive options involving enforcement discretion and/or amnesty appear to have the greatest appeal for smaller businesses.
- **Need for swift time to market.** The various options described in this report that reward companies with increased flexibility in their permits (particularly air permits) hold great appeal to companies that must respond swiftly to changes in their markets. For example, technology companies often must rapidly change their production to respond to new advances in technology. For these companies, additional flexibility to modify production without being delayed by additional permitting can be a powerful incentive. Other companies, however, do not have such time-to-market demands and may be less motivated by such flexibility.

- **Extent of product regulation.** Those incentives involving product review and approval are clearly most applicable to companies producing highly regulated products, such as chemical producers, pesticide manufacturers and pharmaceutical companies. For these companies, incentives that accelerate the product review process are likely to be very effective.
- **Extent of international operations.** Several of the suggested incentives involve changes to U.S. laws and regulations and are, therefore, primarily appealing to companies that operate facilities in the United States. Companies with significant overseas operations are more likely to respond to incentives that can be implemented in their non-U.S. facilities. This includes the adaptation of the regulatory incentives to other countries as well as the use of tax and capital incentives to encourage improved behavior in countries where the regulatory structure is less well developed.

Because there is no “one-size-fits-all” incentive, several of the incentive programs that have been implemented to date offer a menu of incentives in order to encourage improved performance. Under such an approach, those entities participating in the program are given the flexibility to select the incentive which appeals most to their business.

Experience of GEMI Companies With Voluntary Programs

Many companies, including GEMI members, have initiated a wide range of voluntary environmental projects and participated in government-sponsored voluntary programs. One or more of the GEMI companies have participated in virtually every major federal voluntary environmental program offered, including the 33/50, Green Lights, Energy Star, OSHA Star, Waste Wise, Climate Wise, Green Chemistry Challenge and the Environmental Leadership programs. Companies will no doubt continue to undertake these voluntary activities; however, they are under increasing pressure to demonstrate the financial benefit or value to shareholders of such initiatives. This is particularly true in the current climate of corporate retrenchment. Much of the impetus for GEMI’s work in this area was a desire to tip the financial balance to make it easier for companies, big and small alike, to demonstrate the financial benefits of voluntary environmental projects within their companies and to their shareholders. For many projects, even a small incentive can have this desired result.

Differences Between Voluntary Incentives and Market Incentives

In this report “voluntary incentives” are distinguished from the broader idea of “market incentives.” Much has been written in the last 10 years about relying more on market forces as a means of improving our environmental regulatory system.⁶ Many of the ideas contained in this table have been discussed in these previous reports. However, discussions on the use of market forces traditionally include a range of mandatory regulatory structures, such as most pollution trading programs, which are not covered here. While many of the concepts, including trading programs, can offer significant

⁶ See U.S. Environmental Protection Office, Office of Policy, Planning and Evaluation, *Economic Incentives; Options for Environmental Protection*, March 1991.

environmental benefits at a lower environmental cost, GEMI's goal in this effort is to focus more narrowly on approaches governments can use to encourage voluntary environmental improvements.

Other Issues Associated with the Use of Incentives

GEMI's research in this area has focused primarily on identifying incentives that have the promise of encouraging real environmental improvements among small, medium and large companies. While identifying these incentives is an important first step, GEMI recognizes that an effective incentives system must ensure that the system truly results in environmental improvements, that appropriate stakeholders can participate in the process and that several other important issues are addressed. These important factors include the following:

Defining appropriate performance for awarding incentives

Incentives are mechanisms for awarding companies or facilities for making voluntary environmental improvements. Therefore, an incentive program has two main components: the action a company must take and the incentive the company receives for taking the action. The appropriate action a company is required to take to receive an incentive can vary across different industries in recognition of the different environmental issues each faces. Similarly, the required actions may vary according to the size of the company or between facilities that have already made significant progress in implementing superior environmental programs and facilities that have less developed programs. One way to address these differences is to allow companies to choose from a menu of activities, so that companies can select those that are most appropriate to their operations.

Generally, there are three categories of actions that can be required in order to award an incentive. These include:

- **Make an environment-related expenditure.** Companies can be provided incentives for expending resources on an environmental project. Such expenditures could include the purchase of pollution control equipment, the implementation of a pollution prevention program or even the hiring of additional environmental staff. Many of the tax incentives included in this report (e.g., accelerated depreciation, waiver of sales tax) are predicated on some expenditure by a company on an environment-related improvement. In the case of such incentives, the required action (i.e., making the expenditure) is directly tied to the incentive (a tax incentive tied to the amount of the expenditure). Therefore, implementation of such tax programs is relatively straightforward.
- **Reduce emissions or waste generation.** Reducing the release of specified pollutants above and beyond what is required under current regulations can also be rewarded with financial incentives. The reduction could be in hazardous waste generation, total toxics in effluent discharges, hazardous air pollutant emissions, criteria pollutants (VOCs, NO_x, SO_x, CO), global warming gases,

total Toxic Release Inventory (TRI) releases or a subset of TRI releases. Tying an incentive to a reduction in releases is the most direct method of rewarding environmental improvements.

However, there are several problems associated with this approach. First, many industrial facilities have already implemented pollution prevention programs and made significant reductions in releases. For these facilities, the incremental cost of making further reductions is significantly higher than for those facilities that have not implemented pollution prevention programs. An incentive program tied proportionately to the amount of release reduction would reward those facilities or companies that have been slower to implement pollution prevention programs. Second, establishing appropriate baselines from which to measure reductions has proved difficult in other programs (e.g., acid rain trading and 33/50).

Finally, it is often difficult to make appropriate comparisons among different types of pollutants in awarding credits. A reduction in one unit of one type of pollutant may result in a significantly greater public health benefit than a reduction in one unit of another pollutant. Therefore, programs that reward release reductions must decide whether to reward all reductions equally or to vary the incentives according to the toxicity or local burden represented by each type of pollutant.

- **Implement an EMS program element or undertake a community environmental initiative.** Incentives can also be designed to award environmental program initiatives which demonstrate a company's superior environmental leadership. Such initiatives include the implementation of various environmental management system elements, such as regular EMS audits; obtaining ISO 14001 certification; adopting publicized performance measures; or implementing a regular compliance auditing program. Additionally, such activities could include environmental actions a company might take outside its own operations, such as implementing a supplier or customer awareness program; mentoring another company in the development of their EHS program; or sponsoring a community environmental education program.

All three of these types of actions provide real environmental benefits. These benefits include:

- (1) reductions from baseline emissions and releases,
- (2) reduced variability in emissions or releases,
- (3) increased assurance that companies are in full compliance with all specified environmental requirements and
- (4) increased support for community and consumer environmental programs.

It is important to note that for many of the incentive options included in the table, more than one of these types of actions could potentially be required. For example, a tax incentive could be structured to award companies for each unit of pollution reduced, for the cost of additional pollution control equipment or for the implementation of a superior environmental management system.

Accounting for past superior performance

One of the common issues in developing and implementing an incentive program is accounting for companies or facilities that have already undertaken significant environmental improvements and therefore may not be able to take advantage of new incentives. For example, as described above, a tax credit that awards companies for reducing hazardous waste generation benefits companies that have not yet implemented comprehensive waste minimization programs significantly more than those that have made these improvements. The marginal cost of reducing a unit of waste is likely to be higher for the company that has already made large reductions and, therefore, there may be little or no financial benefit from the tax credit. While encouraging those that have yet to implement these types of programs may be a primary goal of the incentive program, it may appear to be unfair to those that have been more proactive.

There are several options for addressing this apparent inequity. First, the incentive option can award verifiable improvements that were made prior to the initiation of the program. For example, a tax credit for waste reduction could apply to reductions made in each current tax year and to reductions made in the previous five years if the taxpayer can validate such reductions (e.g., through the submission of manifest data or similar information). Such an approach may work if the information necessary to substantiate claims of past performance is both readily available and credible.

Another approach is to give companies several options to qualify for the incentive. For example, a tax credit could be awarded to companies that either reduce hazardous waste generation, implement an environmental self-audit program or undertake a mentoring program with a small business. Under such a program, companies who lag behind in their environmental programs would likely reduce waste generation to get the tax credit because their marginal cost for waste reduction is low. Companies that have more well developed environmental programs might opt for the implementation of a self-audit program. Sophisticated companies that already have waste reduction and self-audit programs might choose the mentoring option. Such an approach raises the level of performance of all companies, regardless of their past performance and allows the broadest range of companies to participate in the program.

The need for federal flexibility

Past efforts at providing regulatory flexibility or relief as an incentive to improve superior environmental performance or improve regulatory efficiency have been hampered in part by federal statutory or regulatory requirements that appear to preclude such flexibility. As an example, certain environmental statutes and regulations require that environmental permits be renewed on set schedules (e.g., five or 10 years). Such a statutory requirement effectively restricts a state's adoption of an incentive option that offers participating companies longer permit renewal schedules. Similarly, current regulations may restrict the ability to allow more flexibility in permit modifications.

In cases in which such potential restrictions exist, GEMI members believe that pilot projects, site-specific rulemakings, temporary enforcement waivers and similar mechanisms should be used to allow for the testing of alternative

approaches. Considerable flexibility currently exists to grant such temporary waivers. When done in the context of pilot programs, allowing such flexibility will provide EPA and other federal decision-makers with important information about the merits of various innovative regulatory approaches, while not sacrificing the current integrity of existing laws and rules. In instances in which statutory language clearly precludes the use of certain regulatory modifications even on a temporary basis, GEMI would support limited waivers for the short-term pilot testing of innovative incentive programs.

Attachment 1
Examples of Incentive-Based State Programs

Increase level of pollution prevention.

Voluntary incentives can (and have) been used to encourage pollution prevention among both small and larger businesses. While most states have encouraged pollution prevention primarily through information dissemination and technical assistance, a few states utilize more direct incentives as well.

- Michigan's Clean Corporate Citizen program encourages companies to
 - (1) identify pollution prevention opportunities,
 - (2) establish pollution prevention goals,
 - (3) report on accomplishments and
 - (4) participate in information and technical exchange programs. Companies that undertake these activities through established state programs as well as accomplish other environmental objectives are eligible for more flexible air permits as well as an expedited permit review period.

Frank Baldwin

Michigan Department of Environmental Quality

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- Delaware, through its Green Industries Initiative, promotes decreases in releases reported under the Toxic Release Inventory through the use of income tax credits. Qualifying companies must demonstrate a minimum 20 percent reduction.

Evadne Giannini

Delaware Economic Development Office

(302) 739-4271

- Oklahoma encourages the installation of equipment used for "recycling, reusing or reducing hazardous waste" by offering a tax credit for 20 percent of the purchase and installation cost of equipment. The maximum credit is \$50,000.

Oklahoma Department of Commerce

(405) 815-6552

- Oregon also promotes the purchase of "pollution prevention equipment" by offering a tax credit up to 50 percent of the certified cost of the equipment.

Oregon Economic Development Department

(503) 986-0123

- Rhode Island encourages the use of "source reduction equipment" by offering refunds on the sales tax on the purchase of such equipment when certified by the State.

Rhode Island Economic Development Corporation

(401) 277-2601

Reduce releases of regulated pollutants.

Several innovative programs are in place to encourage companies to reduce emissions of regulated substances beyond regulatory standards.

- Michigan developed a voluntary statewide Emission Averaging and Emission Reduction Credit Trading program for volatile organic compounds (VOCs) and other criteria pollutants. The trading program awards credits for reductions in emissions

beyond what is required by an applicable emission standard or limitation or a baseline derived from a facility's historical operations. Companies that reduce beyond these levels may sell credits to other companies. In addition, local governments can purchase credits and use them as economic development incentives to attract new businesses.

Dennis Drake
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- Several of the XL Projects have involved commitments to reduce regulated pollutants beyond current standards. For example, Merck & Co., Inc. has committed to limit SO₂ and NO_x emissions from its Elkton, Virginia facility near the Shenandoah National Park. To achieve these levels, Merck will convert from coal to natural gas at an estimated capital cost of \$10 million. Under this commitment, Merck will be able to make changes in its production process without having to obtain approval from EPA or the Virginia Department of Environmental Quality so long as those changes do not cause the facility to exceed an emissions cap.

Robin Moran
U.S. EPA Region 3
(215) 566-2064

-or-

John Daniel
Virginia Department of Environmental Quality
(804) 698-4311

Reduce emissions of non-regulated pollutants.

The use of incentives is the primary mechanism in the federal plan for achieving targeted reductions in greenhouse gas emissions. The federal plan, announced in October 1997 includes a variety of tax incentives to encourage reductions and to encourage research and development in new greenhouse gas reduction technologies. The plan also includes the awarding of credits to companies for the early reduction of emissions.

U.S. Department of Energy
Office for Energy Efficiency and Renewable Energy
(800) 363-3732

Reduce non-point source water pollution.

A good example of a non-point source incentive program was implemented by the Minnesota Pollution Control Agency (MPCA). MPCA used a pollutant trading initiative as an incentive to encourage non-point source reductions and to maintain limits on pollutant loading of a watershed. Under the initiative, a company that sought to construct a new wastewater treatment was required to offset the increase in point-source discharges with reductions in non-point source discharges up-stream from the facility. Without this innovative mechanism, the construction of the new treatment facility might not have occurred because of the overall cap on total discharges imposed by the MPCA.

Norman Senjem
Minnesota Pollution Control Agency
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Provide regulatory compliance assistance to small businesses.

Many state governments have established innovative programs designed to encourage small business compliance:

- Wisconsin, Minnesota, Michigan and Illinois have joined together with industry and environmental representatives to implement the Great Printers Project. The project works with the printing industry, comprised mostly of small businesses, to encourage companies to subscribe to the Great Printers Principles, which include compliance with existing laws, moving beyond compliance to maximize waste reduction and seeking continuous environmental improvements. Companies are encouraged to participate through the provision of industry-targeted environmental regulatory guides, self-assessment and pollution prevention checklists and through formal public recognition.

Lois Morrison

Council of Great Lakes Governors

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- The Illinois Environmental Protection Agency (IEPA) initiated the “Clean Break” program which provides regulatory assistance to small businesses in a non-adversarial manner. Under the program, small businesses wishing to participate may receive free regulatory assistance from the Agency with the promise that the State will not seek any enforcement action against the company if a violation is discovered. By offering amnesty, IEPA has effectively overcome the fear many small businesses have of regulatory agencies and has therefore spurred significant increases in small business compliance.

John Kelly

Illinois Environmental Protection Agency

(312) 814-5427

- Alaska’s Department of Environmental Conservation is developing a program to assist small communities improve the performance of locally-owned government facilities. The program provides a cooperative approach toward bringing local facilities into full compliance with ADEC regulations, through the development of a five-year compliance plan based on the prioritization of risk factors.

Alan Wien

Alaska Department of Environmental Conservation

(907) 376-5038

- The Maine Department of Environmental Protection runs the Environmental Leadership Program to recognize independent gas stations that have achieved full compliance or are going beyond compliance. The incentives in this program are primarily promotional in nature and include stickers the stations can display indicating they are certified Environmental Leaders, a sample press release package, information brochures that can be distributed to customers and official recognition from the Governors office. The program may be expanded to include printers and auto repair facilities.

Brian Kavanah

Maine Department of Environmental Protection

798-9802

- In order to encourage compliance among dry cleaners with recordkeeping and reporting requirements, the Florida Department of Environmental Protection (FDEP) developed an easy-to-use “compliance calendar” and distributed it to dry cleaners. The calendar identifies important compliance milestones. Compliance with recordkeeping has risen 74 percent since the issuance of the calendar.

*Maggie Cangro
FDEP Southwest District Office
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Encourage the use of environmental management systems.

- Several states have joined together to form a Multi-State Work Group specifically to evaluate the effect of ISO 14001 on environmental performance and to test mechanisms for encouraging the adoption of an ISO 14001 EMS. The states include California, Texas, Oregon, Arizona, Illinois, Minnesota, Wisconsin, Pennsylvania, Massachusetts and North Carolina. The pilot tests are using and will use a variety of approaches to test whether ISO 14001 can in some instances be superior to an approach that relies heavily on rules, regulations and traditional enforcement programs. Under many of the pilots, participating facilities will adopt an ISO 14001 program while being provided discretion on such issues as permitting, inspection frequency and reporting obligations. The pilots will then evaluate whether the same or better environmental results were achieved a lower cost (both public and private).

*Dr. Robert D. Stephens
California Department of Toxic Substances Control
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- As part of the Michigan Clean Corporate Citizen program, companies must demonstrate that they have a strong and effective environmental management system in place. The EMS must include, among other components, identification of environmental impacts, self-initiated compliance audits, public participation, a strong and clear statement of the company’s commitment to environmental excellence and environmental training for employees. Companies that demonstrate they have such an EMS, as well as demonstrating a strong compliance and pollution prevention program, are eligible for flexibility in air permitting as well as expedited permit processing.

*Frank Baldwin
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373-4720*

- The Maine Department of Environmental Protection is promoting the use of management systems for compliance and pollution prevention through several mechanisms. One of these mechanisms is an audit policy which provides regulatory relief only for companies with established environmental compliance systems.

*Ron Dyer
Maine Department of Environmental Protection
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Encourage voluntary cleanup and redevelopment of contaminated properties.

States and localities are currently using a variety of financial incentive mechanisms to spur brownfields development. These mechanisms include revolving loan funds, loan guarantees, credit enhancement mechanisms, grants, tax incentives, tax increment financing and direct equity participation strategies.

Michigan, for example, has a broad package of incentives for brownfields development which include:

- Grants to local governments for site assessments at potential brownfields sites.
- A loan fund for local governments to carry out both site assessments and demolition activities at sites ready for redevelopment.
- A tax capture program that allows municipalities to capture the increase in tax revenue generated from the increased value in a property due to a brownfields project; and
- A business tax credit for businesses making investments in contaminated property.

Sharon L. Edgar

Michigan Department of Environmental Quality

(517) 373-4813

Decrease the time required to issue permits without increasing program resources dedicated to permitting or the quality of the permits.

A variety of innovative permitting programs which incorporate incentives for business participation are now being implemented at the state level.

- The Environmental Results Program (ERP) initiated by the Massachusetts Department of Environmental Protection (DEP) replaces state environmental permits with stringent, industry-wide environmental performance standards. Companies are required to submit annual certifications that they meet these performance standards and provide certification information in an on-line, publicly available format. The program, which applies to state permitting requirements only and not to permits issued in conjunction with federally-delegated programs, eliminates the need for facilities to obtain permits and gives companies flexibility in meeting standards. It has also reduced the time required to review permits, allowing DEP to focus more on other compliance monitoring activities.

Skip Russell

Massachusetts Department of Environmental Protection (DEP)

(617) 292-5815

- Florida's Department of Environmental Protection developed an "ecosystem management initiative" that offers "team permitting" as an alternative to traditional permitting. Applicants who need to receive permits from multiple agencies can agree to have team permits known as "ecosystem management agreements." This approach results in increased permit flexibility, expedited permit processing, alternative monitoring and reporting requirements, cooperative inspections and other incentives. In turn, the applicants must have

stellar compliance records and must demonstrate that this approach will result in a “net ecosystem benefit” to the affected ecosystem and a reduction in overall risks to human health and the environment.

Ernie Barnett

Florida Department of Environmental Management

(850) 488-4892

- The Mississippi Department of Environmental Quality “re-engineered” its permitting process to improve the efficiency and effectiveness of the permitting program. The re-engineering included the following modifications to the permitting process:
 - Assignment of a single person as a point of contact for all permits issued to a given facility.
 - Increased guidance on the use of general permits and options for reducing permitting requirements based on implementation of pollution prevention into the facility’s design.
 - Customize permit applications that include incentives for pollution prevention.
 - Streamlining the technical review process thereby allowing more efficient deployment of resources.

Jerry Cain

Mississippi Department of Environmental Quality

961-5073

- The Arizona Department of Environmental Quality (ADEQ) is implementing a rule that requires ADEQ to establish specific time frames for the issuance of licenses and permits. Failure of the State to issue licenses under specified permits results in a refund of application fees as well as financial penalties for ADEQ.

Mark Santana

Arizona Department of Environmental Quality

(602) 207-4251

Maximize the effectiveness of program resources for compliance monitoring and enforcement.

- The OSHA Voluntary Protection Program (VPP) encourages compliance with safety laws while at the same time reducing reliance on detailed facility inspections by OSHA. Under the VPP, companies that demonstrate superior safety performance (e.g., at or below national average injury rates for their industry) and have various management and safety program elements in place are eligible to be designated “Merit” or “Star” facilities. Following an initial on-site evaluation, facilities that qualify are not subject to annual compliance inspections, only to on-site reviews of their programs conducted every three years and inspections prompted by safety incidents or employee complaints.

Occupational Safety and Health Administration

Division of Voluntary Programs

(202) 219-7266

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