

Design for Environment Incentives: Opportunities within Oregon's Product Stewardship Framework

March 18, 2009

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Prepared for



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ACKNOWLEDGEMENTS

Although prepared with funding from Oregon Department of Environmental Quality (DEQ), the contents of this report/document do not necessarily reflect the views or policies of DEQ, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

The authors of this report would like to thank Sejo Jackson of Snohomish County Solid Waste Management Division, Garth Hickle of the Minnesota Pollution Control Agency, Kathy Frevert, California Integrated Waste Management Board, Maria Kelleher of Kelleher Environmental, and Liz Parry of Stewardship Ontario/Blue Box Program who took the time to share their knowledge, experiences and expertise implementing stewardship programs.

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1.0 Introduction

Oregon is taking a leadership role in product stewardship solutions for toxic and difficult to manage waste products. The Oregon Department of Environmental Quality (DEQ) is interested in adopting and implementing solutions that include incentives for product and production improvements that have positive environmental and human health impacts.

The intent of this initial research is to document and evaluate existing information on incentives for improvements in design for environment (DfE) for products and production that could be used in a product stewardship context or system. In the context of this report, the term DfE is used broadly to incorporate both product design and manufacturing.

Product Stewardship systems assign the cost, and perhaps the physical responsibility for management of products at end-of-life (EOL) – more explicitly called producer responsibility. One of the goals of producer responsibility is that the producer will be incentivized to improve the environmental product design based through accruing the cost for EOL. Though current evidence does not demonstrate a strong correlation between producer responsibility and environmental design improvements, some evidence suggests that improvements can occur if cost savings are experienced directly.

Most products do not easily afford of such direct cost benefits through producer responsibility. The intent of this study is therefore to identify more effective incentives to influence producers to redesign their products to have an improved environmental impact over the life cycle. These incentives can be delivered through a variety of policy instruments or direct governmental action, such as environmentally preferable purchasing. Often policy instruments and direct action can be combined to achieve the most effective results.

This study reviewed the policies/programs of a variety of public sector jurisdictions reflecting a range of these approaches. When identified, specific examples of DfE incentives are highlighted in the program summaries. However, it is important to note the majority of existing initiatives reviewed that have attempted to incorporate DfE incentives into their stewardship programs, have yet to demonstrate DfE impacts as a result of the policy. There are three exceptions to that. One is the eco-label or environmental purchasing programs. Some of these, exemplified in the electronics market, are ENERGY STAR and EPEAT, both of which have had dramatic impacts on the environmental design and performance of products. These results can be attributed to the power of the marketplace to influence producers' behavior when supported by purchasers who will select products based on their environmental attributes.

Another exception is mandated reporting or disclosure. This "light of day" incentive, as exemplified in the TRI program, has incentivized manufacturers to reduce their use of toxics greatly.

The third exception is take-back mandate that directly ties fees paid to specific product design elements. The best example of this is the EU Green Dot program by which producers pay fees that are related to packaging material choices and weight.

The concepts of producer responsibility and DfE will continue to evolve. Further experience will illuminate if other approaches or policy instruments can be effective in promoting DfE among producers.

2.0 Conceptual Framework for Incentive Mechanisms

“An incentive is any factor (financial or non-financial) that enables or motivates a particular course of action, or counts as a reason for preferring one choice to the alternatives. It is an expectation that encourages people to behave in a certain way.”

Wikipedia

This study explores incentive mechanisms that can be used by government to motivate producers to implement improvements in the environmental design of products.

Incentive mechanisms are different in kind from direct regulatory measures that would specify design requirements. There is a general recognition that incentive mechanisms are more appropriate for improving environmental design for several good reasons:

- Government is generally not in the business of designing products, and there is good reason for government to not take a direct hand in such design activities.
- Product design is ever changing and evolving as technology and taste change and evolve, and specific regulated design requirements would implant rigidity in this process.

Legal and regulatory design requirements are generally limited to singular, and clearly undesirable, attributes, such as banning the use of certain substances. In that sense, the Energy using Product EU Directive (EuP), still in its implementation phase, is a major exception since it is intended to address multiple, life-cycle environmental attributes. However, EuP will apparently make strong use of incentives to accomplish its intent.

By the Wikipedia definition, motivation and encouragement, as distinct from requirements, are the drivers of an incentive program. Incentive mechanisms can be created by laws or regulations, but they operate indirectly. They create a condition or consequence that causes the producer to embrace environment design because it is in its own interest.

Because incentive mechanisms operate indirectly this way, it is critical that they be precisely designed to produce the desired behavior.

The effectiveness of an incentive mechanism can be assessed by how well it accomplishes the following:

1. The alignment of the producer's interest that is created by the incentive with the interest of the creator of the incentive, that is, that they are working toward the same outcome.
2. The strength of the motivation that it creates.

In order to be effective an incentive mechanism must provide three essential functions. Each incentive program can be evaluated in terms of how it provides these functions.

Essential Functions of an Incentive Mechanism
1. Environmental Improvement Objectives – Clearly define the objectives, that is, the desired outcome in terms of specific improved product environmental performance.
2. Measurement Method – Provide a method of measuring the product characteristics, or the producer's behavior, in relation to the environmental improvement objectives.

3. Motivational Reward – Institute a set of conditions or consequences that will motivate the producer to create the work toward the desired outcome.

There are several different types of incentive mechanisms, that are represented in the examples provided in Section 3. These can be either positive – e.g. a benefit – or negative – e.g. a dis-benefit.

Type of Incentive Mechanism	Examples
Direct Benefit – A financial or other benefit (or dis-benefit) that directly accrues to the producer for product improvements	<ul style="list-style-type: none"> • Differential fees • Services, such as technical support and assistance
Indirect Benefit – A financial or other benefit that is a consequence of improving environmental design, but does not accrue directly to the producer	<ul style="list-style-type: none"> • EOL management cost internalization (producer responsibility)
Marketplace Benefit – An advantage (or disadvantage) in the volume of sales or price	<ul style="list-style-type: none"> • Eco-labels and green purchasing
Reputational Benefit – An enhancement of (or detraction from) the producer's reputation in the eyes of consumers or other stakeholders through disclosure of their practices	<ul style="list-style-type: none"> • Stakeholder engagements • Reporting and disclosure • Recognitions, awards and publicity
Threat of Legislation – Avoidance of law or regulation	<ul style="list-style-type: none"> • Establishment of voluntary TPOs, like RBRC

An essential element of effectiveness for an incentive program, which applies to all types, is that the motivational reward (either benefit or dis-benefit) must be unambiguously and directly tied to intended environmental product characteristics. In other words, the measurement method must directly connect the motivational reward to achievement of the environmental improvement objectives. The directness of the connection should be in three ways:

- **Immediacy** – A long time delay between investing in environmental improvements and receiving a reward can drastically reduce the value of the reward, as a function of the discount rate.
- **Unambiguousness** – If the desired product characteristics are not specifically measured and addressed by the reward mechanisms, the effectiveness of the incentive could be reduced.

- Strength – The value of the reward must exceed the added costs of making the environmental improvements, or it will often be neglected.

3.0 Potential DfE Incentive Policy Instruments

3.1 Differentiated Fees

Several product stewardship packaging programs were identified during this research that use differentiated fees to incentivize DfE. The fees are generally linked to activity based costing (cost to recycle, recovery amounts, etc.) and/or types and quantity of material used.

In developing variable fees, the differentiation needs to be logically traced to an incentive. In other words a fee linked to the presence of toxics would theoretically incentivize manufacturers to reduce toxics. For this policy tool, additional research is needed to further explore questions such as how the fees are set and if there is evidence that they impact DfE. Scant evidence of concrete results was found during this research.

Fees on products that are paid by manufacturers (versus consumer fees) have grown quite common in the development of end-of-life systems, especially those based on producer responsibility. Most are flat fees across products with different characteristics, but some have attempted to structure the fees according to several possible product parameters – e.g. cost to recycle or existing recovery rate. Other environmental design parameters would be feasible. The fee setting mechanism and parameters are often defined by legislation or regulation, but can also be defined by a private TPO, when charging its members to raise funds to support recycling systems, that is trying to reduce cost be incentivizing product that cost less to recycle.

Examples

- Ontario's Waste Diversion Act (WDA) requires all companies that introduce packaging and printed paper into Ontario's consumer marketplace ("Stewards") to share in paying 50% of the funding of Ontario's municipal Blue Box waste diversion programs (Section 2.1). The program managed by Stewardship Ontario, an Industry Funding Organization (IFO), uses differential fees with the following objectives:
 - To incentivize manufacturers to make their packaging more recyclable, and
 - To incentivize manufacturers to utilize materials that have higher recovery rates.

Fees are structured – that is set at different levels for different products or materials – based on measurements of the following three parameters:

- The **recovery rate** of each designated Blue Box material
- The **net cost** of recycling each designated Blue Box material
- **An equalization** allocated in direct proportion to the calculated incremental cost for each material to achieve a common threshold percent recovery rate

Fees are then assessed according to the amount of each designated material that they used in packaging or printed material during the previous year.

- The EU's Green Dot program is coordinated by Packaging Recovery Organization (PRO) Europe and is captured under the EU Packaging and Packaging Waste Directive (1994).

The Directive requires companies selling products in Europe to recover their products packaging before it enters waste stream. According to the directive, if a company does not join the Green Dot scheme they must collect recyclable packaging themselves. Regulatory authorities in individual countries are empowered to fine companies for non-compliance although enforcement varies by country. The Green Dot program uses differential fees set by individual EU countries and coordinated with PRO Europe for the use of the Green Dot based on material type, quantity, cost of collection, and sorting and recycling methods to incentivize manufacturers to make their packaging more recyclable.

- WRAP, a third-party organization was established in 2001 in response to the UK Government's *Waste Strategy 2000* to promote sustainable waste management, the EU Landfill Directive, and to help meet recycling targets under Packaging Regulations. WRAP includes “the Retailer Initiative”, a voluntary program aimed specifically at helping the retail sector to identify opportunities for more sustainable product design that facilitates both waste minimization and cost reduction. The program uses a variety of regulatory and voluntary tools including differentiated fees based on materials and quantity, technical support, best in class data, research assistance, and funding for R&D to incentivize manufacturers to make their packaging more recyclable.

3.2 Stakeholder Engagement

Product stewardship initiatives can include some type of stakeholder engagement such as an advisory group, or stakeholder process tasked with exploring environmental improvement options and developing a strategy to do so. The incentive for manufacturers through participation for manufacturers to improve their products is that the process exposes their design decisions to the light of day and effects their reputation amongst participating stakeholders and through attendant publicity.

Example

- The European Union Integrated Product Policy (IPP) Pilot Projects included a mobile phone voluntary IPP pilot project. One of the main goals of the IPP pilot projects was to bring multiple stakeholders from along the entire product chain to the table to identify significant environmental impacts and improvement options through redesign. The program used a voluntary stakeholder process to develop targets (i.e. substance banned list, specific design commitments) for industry participants.

3.3 Voluntary Substance/Material Restrictions

Mandated substance/material restrictions or bans prohibit the sale or distribution of products that contain designated substances or materials that are believed to have harmful environmental impacts that far outweigh any advantages of the product. Substance/material restrictions or bans can also be developed through a stakeholder process and implemented through voluntary agreements, as described below.

Example

- The European Union Integrated Product Policy (IPP) Pilot Projects included a mobile phone voluntary IPP pilot project. The mobile phone pilot companies signed a voluntary agreement aimed at further improving the management of materials/chemicals of

concern. The signatories have individually committed to actions on phase-outs of flame-retardants, PVC and phthalates.¹

3.4 Reporting and Disclosure

Reporting and disclosure requirements can be powerful incentives to change design and material/substance choices. Such reporting exposes the producer and their products to publicity and public awareness. This “light of day” exposure has been demonstrated to have a strong effect on manufacturers in the Toxic Release Inventory (TRI) program.

Examples

- The Massachusetts Toxics Use Reduction Act (TURA) utilizes a variety of voluntary and regulatory tools such as waste diversion targets and mandating reporting requirements for toxics use. From 1990, the first year of reporting to 2005 Core Group facilities reduced toxics shipped in product by 41%; toxic chemical use by 40%; toxic byproducts by 71% and on-site releases of toxics to the environment by 91%.
- The TRI contains detailed information on nearly 650 chemicals and chemical categories that 22,880 industrial and other facilities manage through disposal or other releases, recycling, energy recovery or treatment. The data are collected from industries including manufacturing, metal and coal mining, electric utilities, commercial hazardous waste treatment, and other industrial sectors as required by law. From 2001-2006, total production-related waste managed decreased by 10 percent.

3.5 Support and Assistance

Support and assistance can take many forms, including technical support, grant funding, rewarding leaders, research and development. Many programs researched included support and assistance; however it is very difficult to document tangible DfE results directly associated these types of programs.

Examples

- The Massachusetts Toxics Use Reduction Act (TURA), enacted in 1989, requires companies that use large quantities of specific toxic chemicals to evaluate and plan for pollution prevention opportunities, implement them if practical, and measure and report their results on an annual basis. The program includes support and assistance through awards and recognition for leading efforts to reduce toxics in products and used in manufacturing, technical support and education and outreach.
- The UK's WRAP program includes “the Retailer Initiative”, a voluntary program aimed specifically at helping the retail sector to identify opportunities for more sustainable product design that facilitates both waste minimization and cost reduction. The program includes voluntary tools such as technical support, best in class data, research assistance, and funding for R&D.

¹ <http://ec.europa.eu/environment/ipp/home.htm>

3.6 Green Purchasing

Green purchasing programs are made up of procurement policies and tools, measures, or preferences that specify environmentally preferable products and services. By specifying purchasing preferences for products that have less environmental impact, organizations can spur manufacturers to use recycled-content components, implement design for environment programs, minimize waste, or create less toxic products.

3.6.1 Contract Specifications

By setting general conditions in all contracts – for example, specifications that require minimal or reusable packaging, compel vendors to disclose the presence of certain chemicals, require vendors to demonstrate that their product(s) are safe for human health and the environment, or require vendors to take back products at the end of their useful life —purchasers can ensure that all their contracts educate vendors about the value the purchaser places on product stewardship, and about steps they must take to qualify as a vendor. There are many examples of contract language and policies developed by local, state, and federal governments, as well as private organizations.²

Examples

- The U.S. federal government requires that 95% of computers purchased by federal agencies, representing over \$60bb in IT purchasing contracts, be selected off the EPEAT Registry.
- Purchases of recycled-content paper by King County, Washington, agencies grew from 8% in 1989 to 94% in 1998, after the County adopted federal guidelines for minimum recycled-content.³
- As part of a Toxics Reduction Strategy (TRS), the city of Portland and Multnomah County are developing boilerplate procurement language that places the burden of proof on a vendor to demonstrate that their product(s) are safe for human health and the environment. For example, the vendor would be required to provide information such as full ingredient lists or third-party certification.⁴
- South Korea has passed a comprehensive set of design criteria defining allowable empty space ratios in packaging and limiting the number of layers of packaging for specific product categories.⁵

3.6.2 Price-Preferences

"Price-preference" means an allowance of percentage of increase in price that a purchaser will pay to obtain a designated product. Dozens of governments permit purchasers to pay between 3% and 15% extra for products meeting environmentally preferable criteria. This allows purchasers to select a higher quality and more durable, energy efficient and/or environmentally preferable product as a result of the price preference. Many local, state, and Federal agencies use price preferences for recycled-content products to overcome both price differences and resistance

² <http://yosemite1.epa.gov/oppt/eppstand2.nsf/Pages/Contracts.html?Open>

³ <http://www.metrokc.gov/procure/green/paper.htm>; <http://www.ilsr.org/recycling/epr/tools.html>

⁴ <http://www.oregon-health.org/assets/Precaution/MultCo-Portland%20Toxics%20Reduction%20Strategy%202006.pdf>

⁵ <http://www.ilsr.org/recycling/epr/tools.html>

to trying such products.

Examples

- The State of Alaska has a 5% price preference for recycled-content products purchased for state projects.⁶
- The Purchasing Agency and the Solid Waste Division of King County has established a price-preference of up to 15%) for recycled paper products and up to 10% for re-refined lubricating oil.⁷

3.7 Eco-Labels and Certifications

Product certifications and eco-labels offer a promising strategy for responding to growing consumer demands for greener products. The program objective, that is, the intended environmental outcome, is often defined by establishing defined criteria for manufacturers to meet in a standard. Then the measurement of conformance with that standard can be through a verified registry of conforming products or manufacturers, a verifiable declaration of conformity, or other means. Such a mechanism then generally market access or purchasing preferences as the motivation for improvement.

The two examples below are those of an entity mandating purchases of certified or registered products. Another opportunity is that of consumer choice – if there is an incentive, or requirement, that manufacturers provide readily accessible environmental information to consumers, the market can be a powerful DfE driver.

Examples

- The Electronic Product Environmental Assessment Tool (EPEAT) is multi-attribute environmental procurement tool that creates an incentive for manufacturers to design their products for lesser environmental impact. The state of Illinois recently passed legislation for end of life management of electronic products that includes a requirement for the statewide master contract to require that the electronic products have a Bronze performance tier or higher EPEAT registration (see Attachment A).
- In Sweden, the nation's leading supermarket chain required its laundry detergent and home cleaning product suppliers to qualify for an eco-label or face loss of shelf space. In response to this ultimatum, major companies such as Procter and Gamble, Unilever and Johnson Wax have reformulated their products" to reduce hazardous constituents and meet eco-labeling specifications.⁸
- Recycler certification systems, such as the e-Steward's Pledge, are a strong incentive for recyclers and the companies that utilize them to follow best practices.

⁶ http://www.dced.state.ak.us/dca/logon/pubs/29_71.htm#as71_050

⁷ <http://www.metrokc.gov/procure/green/policy.htm>

⁸ <http://www.ilsr.org/recycling/epr/tools.html>

3.8 Other Potential Incentives

3.8.1 Tax Credit

A tax credit is a financial credit provided by the government to reward citizens or businesses for taking a desired action. This research did not reveal direct use of tax credits for product stewardship; however twenty-five states around the country use some type of tax incentive or credit to promote recycling market development. The large majority of states offer tax incentives for purchasing recycling equipment—either income, sales, or property tax credits. These tax credits range from 10% to 50% of equipment costs.

Examples

- Restrictions often apply to the incentives. Arizona, for example, requires that the equipment process postconsumer solid waste or produce material that is made from at least 25 percent recycled materials. Other states limit the credits to targeted commodities such as paper or plastic. Some states, such as Montana, offer tax credits based on tiers; different levels of credit are offered depending on the amount invested in the equipment.
- Tax incentives can take several other forms, as well. Some states offer sales, real, or property tax exemptions on construction and renovation of recycling facilities. One state offers an employment income tax credit of \$500 for each new employee added as a result of incorporating recycled products into the process. Another state offers an income tax credit to individuals who purchase a product made from recovered materials.
- The State of Oregon offers environmental tax credits to encourage taxpayers to protect Oregon's air, land and water. The Pollution Control Facilities Tax Credit Program provides tax credits for controlling, reducing or eliminating air, water, noise or nonpoint source pollution, recovering usable material from solid or hazardous waste or for recycling used oil. Oregon's Pollution Control Tax Credit program can also be used to advance the development of recycling businesses, as material recovery is one of the criteria for investments eligible for the credit. The credit can amount to up to 50% of the certified cost of the facility; depending on how much of the facility costs can be attributed to pollution control.⁹

3.8.2 Quotas

A quota is a requirement that products or packaging reach a particular recycling, reuse, or refilling rate, or contain a minimum recycled-content. Germany has set a requirement that 72% of containers for most beverages be refillable (the mandatory refillable rate for milk containers is 17%). If the quota is not met, the German government has threatened to impose mandatory deposits on beverage containers. In the United States, eight states and the District of Columbia have set minimum recycled-content levels for newsprint.¹⁰

⁹ <http://www.deq.state.or.us/msd/taxcredits/pcfrc.htm>

¹⁰ <http://www.ilsr.org/recycling/epr/tools.html>

4.0 Recommendations

Based on this research, three types of incentives have demonstrated the greatest potential for motivating improved environmental design.

1. Marketplace benefits (eco-labels/certifications and environmental preferable purchasing)
2. Reputational benefits (reporting/disclosure and stakeholder engagement)
3. Differential product fees

The first, marketplace benefits, is represented by eco-labels/certifications which operate in support of environmental preferable purchasing. Eco-labels and certification standards provide the direct signal of what environmental characteristics are desired – the program goals. And those are then linked directly to purchasing decisions based on verified claims by the producers. The producers experience a direct economic benefit from increased sales or a price premium that purchasers may be willing to pay.

The second, reputational benefits, is seen in two very different types of programs. Mandatory reporting and disclosure, such as the TRI, which provides information to the public that may reflect well, or poorly, on the company. The producer is thereby incentivized to improve its public image by improving its performance. The second type is stakeholder dialogues, generally voluntary and cooperative, which tend to expose company representative directly to stakeholder expectations and concerns. Both types encourage producers to improve environmental design through simply by having their practices exposed to the “light of day”. The process may encourage the producer to enter a voluntary agreement to improve the environmental performance of their products.

And lastly, differential product fees, by which producers are able to pay lower fees if they deliver certain DfE improvements, create a very strong economic incentive.

Provided below are brief discussions of these recommended incentives. Examples of how each incentive could be applied are also provided. Please note that the examples are only included to help illustrate the concept. It is not intended that the examples provided be specific recommendations for implementation. Designing practical examples for implementation is beyond the scope of this project.

4.1 Green Purchasing

Recommendation: Promote green purchasing throughout the state government, higher education, and public and private institutions. Government purchasing should call out specific desired product characteristics or rely on eco-labels.

Example:

Essential Functions of an Incentive Mechanism	Example - Paint
Environmental Improvement Objectives – Clearly define the objectives, that is, the desired outcome in terms of specific improved	Reduce VOCs in paint. Government purchasing would specify a maximum threshold for VOCs in indoor paint.

product environmental performance.	
Measurement Method – Provide a method of measuring the product characteristics, or the producer's behavior, in relation to the environmental improvement objectives.	Producers would either self-declare that their products do not exceed the threshold, or must provide test data to demonstrate that.
Motivational Reward – Institute a set of conditions or consequences that will motivate the producer to create the work toward the desired outcome.	Only those paint manufacturers with paint under the specified VOC threshold will be able to be a supplier the government.

4.2 Differentiated Fees

Recommendation: Look for opportunities to incorporate differentiated fees into product stewardship systems.

A variable fee structure, such as those utilized by the EU's Green Dot program and Stewardship Ontario could be applied in a state product stewardship context. The fees identified in this research are generally linked to activity based costing (cost to recycle, recovery amounts, etc.) and/or types and quantity of material used. Fees could also be linked to use of an eco-label, degree of transparency in reporting or ingredient disclosure, commitment to a voluntary agreement on DfE, or a design quota.

Example:

Essential Functions of an Incentive Mechanism	Example - Carpet
Environmental Improvement Objectives – Clearly define the objectives, that is, the desired outcome in terms of specific improved product environmental performance.	Increase carpet-to-carpet recycling, motivating manufacturers to incorporate design for recycling considerations. Increase availability of environmentally preferable carpet to consumers.
Measurement Method – Provide a method of measuring the product characteristics, or the producer's behavior, in relation to the environmental improvement objectives.	Producers report the percent of post consumer recycled content in the new carpet. Certification to NSF-140, Sustainable Carpet Assessment Standard
Motivational Reward – Institute a set of conditions or consequences that will motivate the producer to create the work toward the desired outcome.	An internalized 1 cent fee per yard of carpet sold into Oregon as a registration fee for mandated participation in a product stewardship program. The fee could be waived/reduced for carpet sold that:

	<ul style="list-style-type: none"> • Contains a minimum level of post consumer recycled content, and/or • Is certified to NSF-140, Sustainable Carpet Assessment Standard.
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4.3 Stakeholder Engagement

Recommendation: Initiate voluntary stakeholder processes to develop voluntary agreements for design and manufacturing improvements such as substance restrictions and reporting and disclosure requirements.

Stakeholder processes incentivize manufacturers to improve the environmental attributes of their products and processes by exposing their design decisions to the light of day thereby effecting their reputation amongst participating stakeholders and through attendant publicity. This kind of effort could be coupled with differentiated fees for those manufacturers willing to commit to a voluntary agreement and demonstrate compliance.

Example:

Essential Functions of an Incentive Mechanism	Example - Lamps
Environmental Improvement Objectives – Clearly define the objectives, that is, the desired outcome in terms of specific improved product environmental performance.	Reduce mercury in fluorescent lamps
Measurement Method – Provide a method of measuring the product characteristics, or the producer's behavior, in relation to the environmental improvement objectives.	Using a stakeholder process, develop a set of targets for manufacturers of mercury-containing lamps to reduce mercury.
Motivational Reward – Institute a set of conditions or consequences that will motivate the producer to create the work toward the desired outcome.	An outcome of the stakeholder process will be an annual report and press release that identifies each producer's progress in phasing out mercury in lamps. An annual award would also be presented to the producer who makes the most progress.

4.4 Reporting through Disclosure, Eco-Label or Certification

Recommendation: Include in Product Stewardship legislation, for selected appropriate products, a requirement that producers provide information to consumers (residential and institutional) regarding the environmental characteristics of their products.

This recommendation includes reporting through mandatory disclosure, or use of an eco-label or product certification as a means of providing information to consumers. The market will then incentivize the production and design of environmentally preferable products.

Eco-labels and environmentally preferable purchasing are, to date, two of the most effective ways to incentivize environmental improvements in product design and production. This section proposes an approach that takes advantage of consumer choice to incentivize the production and design of environmentally preferable products. This program could be established either through legislation that required the appropriate actions from manufacturers and others, or through a voluntary, negotiated agreement.

The ultimate goal is that producers would work with other stakeholders to develop a system by which all producers shall declare the environmental, health and safety performance of their products to consumers. If available, producers may utilize an independent eco-label to fulfill this requirement.

- The system would cause manufacturers to inform consumers about the environmental, health and safety impacts of products throughout their life cycle, including at least, impact on climate change, presence of toxic substances, energy efficiency during use, resource utilization, and recyclability.
- A standard could be developed to which manufacturers would declare conformance for their products, or an eco-index reporting system by which manufacturers would report environmental characteristics of their products.
- The system would provide a method for consumers to easily recognize products that achieve superior performance, such as a label.
- The system should include methods of independent verification of producer declarations.

Example:

Essential Functions of an Incentive Mechanism	Example - Any product
Environmental Improvement Objectives – Clearly define the objectives, that is, the desired outcome in terms of specific improved product environmental performance.	Reduce the environmental, health and safety impacts of products throughout their life cycle, such as, impact on climate change, presence of toxic substances, energy efficiency during use, resource utilization, and recyclability
Measurement Method – Provide a method of measuring the product characteristics, or the producer's behavior, in relation to the environmental improvement objectives.	For selected appropriate products, product stewardship systems could include a requirement that all producers shall declare the environmental, health and safety performance of their products to consumers. They could do so by: <ul style="list-style-type: none"> • Reporting of selected indicators, • Demonstrating conformance to an eco-

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	label, or <ul style="list-style-type: none">• Certification to a standard
Motivational Reward – Institute a set of conditions or consequences that will motivate the producer to create the work toward the desired outcome.	Consumer choice will incentivize the production and design of environmentally preferable products.

Attachment A: Examples of Product Stewardship Programs with DfE Incentives

The following examples are summaries of product stewardship programs which include some form of DfE incentives.

A.1 Stewardship Ontario

<http://www.stewardshipontario.ca/>

Program Description: Ontario's Waste Diversion Act (WDA) requires all companies that introduce packaging and printed paper into Ontario's consumer marketplace ("Stewards") to share in paying 50% of the funding of Ontario's municipal Blue Box waste diversion programs.

Product Type: Packaging, Printed Paper

DfE Policy Instruments:

✓ Differentiated fees

DfE Incentive(s): The program uses differential fees based on material type as an incentive to promote DfE activities with industry. Fees are based on the amount of each designated material that they used in packaging or printed material during the previous year.

The material fees are calculated based on three factors: 1) the net cost to recycle or manage the material; 2) the recovery rate of the material; and 3) "equalization" defined as "a percentage of the financial obligation to municipalities remaining after that allocated by the net cost and recovery rate factors is allocated based on both the cost to manage a material and recovery."¹¹

DfE Result(s): Currently the only documented example of DfE results under Stewardship Ontario is the Liquor Control Board of Ontario (LCBO), the single highest payer of fees in Ontario. Costs became so high for the LCBO in the program they introduced new wine packaging (in the form of a tetrapak), complemented by an effective marketing campaign. Stewardship Ontario and the LCBO tout the success of this initiative as it has reduced their costs and the public reception has been positive.¹²

A.2 Green Dot, Packaging Recovery Organization (PRO) Europe

<http://www.gruener-punkt.de/en/company-info/the-company/portrait.html>

<http://www.pro-e.org/index.html>

Program Description:

Companies selling products in Europe are required by the 1994 European Packaging and Packaging Waste Directive to recover their products packaging before it enters waste stream. The Green Dot, originally introduced by Duales System Deutschland GmbH (DSD) in 1991 following the introduction of Ordinance on the Avoidance and Recovery of Packaging Waste in Germany (German Packaging Ordinance) offers a way for EU companies to satisfy the

¹¹ http://www.stewardshipontario.ca/bluebox/pdf/fees/Fees_Methodology_04_2006.pdf

¹² <http://environment.gov.ab.ca/info/library/7634.pdf>

requirements of the Directive.

Product Type: Packaging, Printed Paper

DfE Policy Instruments:

- ✓ Differentiated fees

DfE Incentive(s): The program uses differential fees for the use of the Green Dot based on material type, quantity, cost of collection, and sorting and recycling methods.

DfE Result(s): The design of sales packaging has been modified in the last few years: refill packs and concentrates have replaced voluminous bottles, more products are sold without blister packs and secondary packaging made of cardboard or plastic has disappeared.

Between 1994 and 2001, Austria achieved a 78% percent reduction in packaging waste consigned to landfill. In addition, the proportion of packaging waste consigned to landfill in Belgium dropped from 46.3% in 1995 to 6.8% in 2003, while the proportion of recycled packaging waste rose from 28.1% to 80.3%.¹³

A.3 U.K. Waste and Resources Action Program (WRAP) Retail Innovation Program

http://www.wrap.org.uk/retail/courtauld_commitment/, <http://www.wrap.org.uk/>

Program Description: WRAP was established in 2001 in response to the UK Government's *Waste Strategy 2000* to promote sustainable waste management, the EU Landfill Directive, and to help meet recycling targets under Packaging Regulations.

WRAP includes “the Retailer Initiative”, a voluntary program aimed specifically at helping the retail sector to identify opportunities for more sustainable product design that facilitates both waste minimization and cost reduction. Additional information on the program is provided in Attachment A.

Product Type: Packaging (food/drink)

DfE Policy Instruments:

- ✓ Differentiated fees
- ✓ Support and assistance

DfE Incentive(s): The program uses a variety of regulatory and voluntary tools including differentiated fees based on materials and quantity, technical support, best in class data, research assistance, and funding for R&D.

DfE Result(s):

- Thirty-seven top retailers, brands and suppliers have signed on to WRAP's *Courtauld Commitment* pledging to design out packaging waste growth by 2008 and deliver absolute reductions in packaging waste by March 2010.
- WRAP has worked with companies to make lighter containers or reduce the size of containers. Beer brewer Marston's made its 500ml bottle 22 percent lighter, and Scottish &

¹³ <http://www.pro-e.org/files/prevention.pdf>

Newcastle now pours its cider into bottles 14 percent lighter than previous containers.

Additional Program Details:

WRAP was established in 2001 in response to the UK Government's *Waste Strategy 2000* to promote sustainable waste management, the EU Landfill Directive, and to help meet recycling targets under Packaging Regulations. WRAP identified that increases in recycling rates and composting would help the UK comply with the directive; however, it also identified that a combination of sustainable design practice and waste management approaches was necessary to effectively address sustainable consumption and production issues in the country. To achieve its goals, the Government's strategy is to address the problem at a number of levels:

- Increasing local authority statutory recycling and composting targets;
- Raising recycling targets under packaging regulations;
- Increasing costs of landfill use through a Landfill Tax escalator;
- Installing new capacity to treat residual waste to render it inert so that it no longer counts toward the Landfill Directive Targets;
- Reducing the packaging of household waste by consumers, particularly the amount of packaging and food they throw away.

WRAP research showed 35-40% of household waste that ends up in a landfill began its life as a purchase from the top 5 retail supermarkets. In response they launched "the Retailer Initiative", a voluntary program aimed specifically at helping the retail sector to identify opportunities for more sustainable product design that facilitates both waste minimization and cost reduction. WRAP provides incentives for retailers to participate in the form of technical support, best in class data, help conducting research, and funding for R&D, demonstration and trial projects through its Waste Minimization Innovation Fund. There have been six Innovation Fund rounds to date. Thirty-seven top retailers, brands and suppliers have signed on to WRAP's *Courtauld Commitment* pledging to design out packaging waste growth by 2008 and deliver absolute reductions in packaging waste by March 2010.

A.4 European Union Integrated Product Policy (IPP) Pilot Projects

<http://ec.europa.eu/environment/ipp/home.htm>

Program Description: In 2003, a resolution to develop an IPP framework was adopted by the EU. One of the first initiatives included two voluntary IPP pilot projects (mobile phones and tropical wooden garden chairs) to demonstrate how IPP can work in practice. One of the main goals of the IPP pilot projects was to bring multiple stakeholders from along the entire product chain to the table to identify significant environmental impacts and improvement options through redesign.

The IP Mobile Phone Pilot took place over 1 year (2007-2008) and included three objectives anticipated to have direct influence over product design: reduce energy consumption in use phase, reduce and eliminate agreed materials of concern, and environmental assessment methods/tools.

Product Type: Pilot on mobile phones and tropical wooden chairs

Policy Instruments:

- ✓ Stakeholder engagement
- ✓ Voluntary agreements

DfE Incentive(s): The program used a voluntary stakeholder process to develop targets (i.e. substance banned list, specific design commitments) for industry participants.

DfE Result(s):

- Manufacturers participating in the pilot on tropical wooden garden chairs made individual commitments to design improvements in packaging and materials selection (http://ec.europa.eu/environment/ipp/pdf/final_report.pdf).
- The mobile phone pilot companies signed a voluntary agreement aimed at further improving the management of materials/chemicals of concern. The signatories have individually committed to actions on phase-outs of flame-retardants, PVC and phthalates.

Additional Program Details:

In 2001, the European Commission (EC) released a green paper on IPP, and in 2003 a resolution to develop an IPP framework was adopted by the European Commission and the Parliament.

Tasked with developing an IPP framework, the EC consulted with the Member States to identify how best to implement IPP in the manufacturing sector. As one of its first initiatives, the EC launched a voluntary IPP pilot project to demonstrate how IPP can work in practice. The Commission selected two pilots (mobile phones and tropical wooden garden chairs) from 22 suggestions from stakeholders. The importance of the environmental impact of these products did not play a role in the selection process. One of the main goals of the IPP pilot projects was to bring multiple stakeholders from along the entire product chain to the table to identify significant environmental impacts and improvement options through redesign.

There were no financial incentives to attract companies to participate in the IPP Projects, however participating companies saw the value of engaging during the pilot stage (i.e. influence policy they would ultimately have to abide by, raise their profiles as sustainable producers in the marketplace).

The IP Mobile Phone Pilot took place over 1 year (2007-2008) and consisted of six objectives with a task force assigned to each one. The Task Forces tackled the following

1. Consumer education
2. Usage and disposal
3. Reduce energy consumption in use phase
4. Reduce and eliminate agreed materials of concern
5. Take-back of phones
6. Environmental assessment methods/tools

The aim of Task 4 was to reduce and eliminate the use of certain flame-retardants, heavy metals and phthalates in plastics from mobile phones. This would be accomplished by the phone manufacturers in close cooperation with the component manufacturers as they have control over the design and the manufacturing phase. For Task 6, stakeholders drew from past experiences from the mobile phone industry to use environmental impact methods and tools such as life cycle

assessment (LCA) for eco-design and product information purposes. The aim of this task force was to solve the challenges, especially to set inventory data for primary components on a broader base and to find a consensus about the best suitable impact assessment methods. The focus was especially on simplified environmental assessment methods such the Key Environmental Performance Indicators (KEPIs) and their data requirements.

The Program has been successful at achieving its primary goals of bringing multiple stakeholders together (in a product panel format) to identify more sustainable solutions can be used to demonstrate to European Member States how the IPP methodology can be practically applied.

Stakeholders participating in the second pilot on tropical wooden garden chairs made individual commitments to design improvements around packaging, and materials selection. The full pilot final report can be found at http://ec.europa.eu/environment/ipp/pdf/final_report.pdf

In the mobile phone pilot, stakeholder working on reducing and eliminating flame retardants found it very difficult to set overall requirements that the flame retardants should meet for specific parts. As a result, the task force agreed to develop a new format of a voluntary agreement that would aim to phase out a list of flame-retardants.

It was also determined that as all companies are involved/monitoring the IEC and IPC Material Declaration standard developments (http://members.ipc.org/committee/drafts/2-18_d_MaterialsDeclarationRequest.asp), stakeholders believe this tool shows most potential to be used as the material declaration standard for the mobile phone industry.

The companies joining this agreement have signed a voluntary agreement aimed at further improving the management of materials/chemicals of concern. The signatories have individually committed to the actions on phase-outs of flame-retardants, PVC and phthalates. The companies joining this agreement are LG, Motorola, Nokia Samsung Electronics and SonyEricsson. This agreement will be reviewed once a year.

A.5 European Union Eco- Design Directive for Energy Using Products (EuP)

http://www.eceee.org/Eco_design/

Program Description: The EU Eco-Design Directive was adopted in 2005 and sets a framework for performance criteria which manufacturers must meet in order to legally bring their product to the market. Implementing measures for 18 prioritized product categories are being developed by the European Commission, and are vetted through discussions with key stakeholders and a public comment process.

Once the Eco-design Directive becomes effective, manufacturers who market an energy using product covered by an implementing measure in the EU area will have to ensure that it conforms to the energy and environmental standards set out by the measure.

Product Type: All energy using products

DfE Policy Instruments:

- ✓ Stakeholder engagement
- ✓ Minimum performance standards

DfE Incentive(s): The regulatory program uses a stakeholder process to develop performance standards in product “lots” specifying DfE requirements.

DfE Result(s):

- EU Member States experts have endorsed the European Commission's proposals for a regulation progressively phasing out incandescent bulbs starting in 2009 and finishing at the end of 2012. By enforcing the regulation of switching to various sorts of energy saving lamps, the European Commission estimates that the EU will save close to 40 TWh electricity annually.
- The European Parliament is currently considering a proposal to extend the EU's ecodesign directive to cover all product types and not just "energy-related" products. The proposal is expected to be heavily debated in the coming months.¹⁴

Additional Program Details:

The EU Eco-design Directive was adopted in 2005. The Eco-design Directive sets a framework for performance criteria which manufacturers must meet in order to legally bring their product to the market. It does not yet, however, prescribe specific measures or standards and sets no overall energy saving targets. The Directive is a concrete example of how the principles of the Integrated Product Policy are applied.

Detailed actions will be introduced by the European Commission following a process of discussion with key stakeholders and through what the Commission calls "implementing measures", which can be minimum energy performance standards (MEPS) or other mechanisms. Since earlier Directives for MEPS already contain efficiency requirements for certain products these are to be integrated into the Eco-design Directive framework and considered as the basis for implementing measures.

All energy-using products sold in the domestic, commercial and industrial sectors are potentially covered by the new Directive with the exception of all means of transport which are covered by other legislation. Once the Eco-design Directive becomes effective, manufacturers who begin marketing an energy-using product covered by an implementing measure in the EU area will have to ensure that it conforms to the energy and environmental standards set out by the measure. The EuP Directive will explicitly require producers to report on their ecodesign activities – does not yet specify what those must be, but that producers must incorporate DfE tools and techniques in their product development processes.

The Directive will give preference to alternative courses of actions such as self-regulation by industry where such actions are likely to deliver the policy objective faster or less costly than mandatory requirements. This approach was taken to ensure the creation of a coherent framework for environmental product policy that avoids the adoption of uncoordinated measures that could lead to an overall negative result (i.e., eliminating a toxic substance from a product, such as mercury from lamps, might lead to increased energy consumption, which on balance would have a negative impact on the environment).

The framework directive stems from the combination of two Commission initiatives: one on the impact on the environment of electrical and electronic equipment ("EEE" working document), and the other on the energy-efficiency requirements for end-use equipment. While the Directive's primary aim is to reduce energy use, it also enforces other environmental considerations including: materials use; water use; polluting emissions; waste issues and

¹⁴ http://www.eceee.org/news/news_2009/2009-01-22a/

recyclability. It is estimated that over 80% of all product-related environmental impacts are determined during the design phase of a product.

During 2008 and 2009 implementing measures are expected for 19 product categories. Each product group is called a "Lot". Office lighting, cold appliances and external power supplies are examples of such lots, which eventually will become separate regulations. For each lot, there is an extensive product study, which examines market data, technological status, etc, and provides recommendations to the Commission. During the study phase, interested stakeholders will meet to discuss the study.

Each product study is followed by a proposal from the Commission. This is discussed in the so-called Consultation Forum. This group consists of experts and stakeholders. It aims to inform stakeholders and provide their contribution to the implementation of the Directive. The Consultation Forum contributes to the definition and review of the implementing measures, examines the efficiency of the market surveillance mechanisms and the assessment of voluntary agreements in the context of the Directive.

The process continues with drafting and outlining impact assessments, after which the Commission develops a final proposal. This proposal is sent to voting in the Regulatory Committee before the Commission adapts the implementing measure (IM). The most likely legal form of the IM is "regulation", which means that it takes direct legal effect in all Member States.

A.6 Massachusetts Toxics Use Reduction Act (TURA)

<http://www.mass.gov/dep/toxics/tura/turaover.htm> - about

Program Description: The Toxics Use Reduction Act (TURA), enacted in 1989, requires Massachusetts companies that use large quantities of specific toxic chemicals to evaluate and plan for pollution prevention opportunities, implement them if practical, and measure and report their results on an annual basis. They must also evaluate their efforts and update their toxics use reduction plans every other year.

Product Type: Toxics in products and product manufacturing

DfE Policy Instruments:

- ✓ Reporting and disclosure requirements
- ✓ Support and assistance

DfE Incentive(s): The program utilizes a variety of voluntary and regulatory tools such as waste diversion targets and mandating reporting requirements for toxics use. The program also includes support and assistance through awards and recognition for leading efforts to reduce toxics in products and used in manufacturing, technical support and education and outreach.

DfE Result(s): TURA progress is measured by using reported data (excluding trade secret data) normalized for changes in production and using a consistent set of chemicals and industries subject to reporting over a given period of time (referred to as a "Core Group"). From 1990, the first year of reporting to 2005 Core Group facilities reduced:

- Toxics shipped in product by 41%
- Toxic chemical use by 40%

- Toxic byproducts by 71%
- On-site releases of toxics to the environment by 91%

Additional Program Details:

The Toxics Use Reduction Act (TURA) requires Massachusetts companies that use large quantities of specific toxic chemicals to evaluate and plan for pollution prevention opportunities, implement them if practical, and measure and report their results on an annual basis. They must also evaluate their efforts and update their toxics use reduction plans every other year. The goals of the law are to:

- Reduce the generation of toxic waste by 50 percent statewide (this was accomplished by 1998);
- Establish toxics use reduction (TUR) as the preferred means for achieving compliance with federal and state environmental, public health and work safety laws and regulations;
- Provide and maintain competitive advantages for Massachusetts businesses, both large and small, while advancing innovation in cleaner production techniques;
- Enhance and strengthen environmental law enforcement across the state; and
- Promote coordination and cooperation among all state agencies that administer toxics-related programs.

On July 28, 2006 the following amendments to TURA were passed by the state Legislature and signed into law.

- Streamlined the reporting and planning requirements;
- Established categorization of chemicals as high hazard and low hazard with different reporting thresholds and fees; and
- Provided options for resource conservation planning (e.g., energy, water, materials) and environmental management systems (EMSs) to supplement toxics use reduction plans.

Four separate organizations share responsibility for ensuring that the environmental and economic goals of the Massachusetts Toxics Use Reduction Act (TURA) are being met.

- The Department of Environmental Protection (MassDEP), through its Bureau of Waste Prevention, is responsible for implementing TURA. MassDEP certifies TUR Planners, receives and reviews toxics use reports submitted by companies subject to TURA requirements, provides guidance to both, takes enforcement actions against non-reporters, manages collected data and makes it available to the public, and evaluates the state's overall progress as it works toward the goals of TURA.
- The Office of Technical Assistance and Technology (OTA) is a non-regulatory agency within the Executive Office of Energy and Environmental Affairs that provides free, confidential, on-site technical and compliance consultations to manufacturers, businesses and institutions. OTA also facilitates the development of innovative TUR technologies and sponsors workshops and conferences that focus on toxics use reduction activities for specific industry sectors.
- The Toxics Use Reduction Institute (TURI), on the Lowell campus of the University of

Massachusetts, provides TUR education and training for professionals and the general public, conducts a technology transfer program and sponsors research into the development of cleaner, safer production materials and technologies. The Institute consults with an eleven-member Science Advisory Board on issues such as the addition or deletion of chemicals from the TURA chemical list and the designation of chemicals as higher or lower hazard.

- The six-member Administrative Council on Toxics Use Reduction brings together representatives of state agencies responsible for environmental protection, public health, occupational safety, public safety and economic development. Assisted by an Advisory Committee of stakeholders, the Council promotes industrial development that enhances the environment and improves overall quality of life in Massachusetts

A.7 Oregon Toxics Use and Hazardous Waste Reduction Program

<http://www.oregondeq.org/lq/pubs/factsheets/hw/2005TUHWRAFactSheet.pdf>

Program Summary: Oregon's Toxics Use and Hazardous Waste Reduction (TUHWR) Act of 1989 was one of the first laws in the nation to mandate pollution prevention planning. The Act outlines a comprehensive approach to reduce or eliminate toxic substances use and hazardous waste generation. In June 2005, the Oregon Legislature passed a new law (ORS 465.003 to 465.037) that streamlined and made other significant changes to the TUHWR Program.

Product Type: Toxics in products and product manufacturing

DfE Policy Instruments:

- ✓ Reporting and disclosure requirements
- ✓ Support and assistance

DfE Incentives: Businesses in the program must develop a Reduction Plan or an Environmental Management System (EMS), report completion of a Plan or EMS. They also must report reductions and update and keep the *Plan* or *EMS* on site.

DfE Results: [sent email to David Livengood](#)

A.8 California Green Chemistry Initiative

Assembly Bill 1879 and Senate Bill 509, Enacted September 8, 2008

<http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistryInitiative/index.cfm>

Program Summary: The state of California has established a Green Chemistry Initiative to develop policy options for implementing a green chemistry program. The goal of this initiative is to work with scientists from California and around the world to evaluate the health effects of chemicals and possible alternatives with a systematic and comprehensive approach that is science-based. AB 1879 and SB 509 build on this initiative and contain provisions to implement two of six key recommendations from the Green Chemistry Initiative - Phase Two Report.¹⁵

- Expand **Pollution Prevention** and **Product Stewardship** programs.
- Develop **Green Chemistry Workforce Education Training** through new and existing

¹⁵http://www.dtsc.ca.gov/PollutionPrevention/GreenChemistryInitiative/upload/GREEN_Chem.pdf

educational programs and partnerships.

- Create an **Online Product Ingredient** network to disclose chemical ingredients for products sold in California, while protecting trade secrets. (SB 509)
- Create an **Online Toxics Clearinghouse**, an online database of chemical toxicity and hazards populated with the guidance of a Green Ribbon Science Panel to help prioritize chemicals of concern and data needs. (AB 1879)
- Accelerate the quest for **Safer Products**, creating a systematic, science-based process to evaluate chemicals of concern and alternatives to ensure product safety and reduce or eliminate the need for chemical-by-chemical bans.
- Move toward a Cradle-to-Cradle economy, establishing a **California Green Products Registry** to develop green metrics and tools (e.g., environmental footprint calculators, sustainability indexes) for a range of consumer products and encourage their use by businesses.

Product Type: Toxics in Products and Product Manufacturing

DfE Policy Instruments:

- ✓ Reporting and disclosure requirements
- ✓ Support and assistance
- ✓ Stakeholder engagement

DfE Incentives: The Initiative aims to use a combination of regulatory and voluntary approaches including disclosure requirements, publically accessed database, restrictions/bans, stakeholder engagement, R&D support.

DfE Results: The Department of Toxic Substances Control has until January 2011 to develop how the laws will be implemented. The DTSC is utilizing an innovative tool- *California Green Chemistry Wiki* to promote inclusion of all stakeholders and to spur informal collaboration on the Green Chemistry rule development process.¹⁶ While it is too early to determine the results of this initiative, it is widely believed that green chemistry represents a major paradigm shift that focuses on environmental protection at the design stage of product and manufacturing processes.

A.9 Regulation Determining Acceptable Alternatives to Arsenic Treated Wood

Enacted 2003, City of San Francisco Environmental Code

<http://sfenvironment.org/downloads/library/acceptablealternatives.pdf>

Program Description: This regulation requires the San Francisco Department of the Environment to identify, prepare and adopt a list of environmentally preferable alternatives to preservative-treated wood containing arsenic. Each City Department can purchase only products from the list of alternatives adopted by the Department of the Environment.

Product Type: Arsenic Treated Wood

DfE Policy Instruments:

¹⁶ <http://cagreenchem.wikidot.com/start>

- ✓ Restrictions/bans
- ✓ Green purchasing

DfE Incentive: Manufacturers wanting to do business with the city of San Francisco must go through the City's product alternative assessment process and meet all the requirements.

DfE Results: Contract bidding is open only to manufacturers that have products on the city of San Francisco's alternatives list. There are exemptions where alternatives did not perform adequately.

A.10 Illinois Electronic Products Recycling and Reuse Act (SB2313)

<http://www.ilga.gov/legislation/95/SB/PDF/09500SB2313lv.pdf>

Program Description: The law, recently enacted in September 2008, requires manufacturers to set up and pay for the collection, transport and recycling of the covered electronic products which they sell in the state. The law also includes an environmentally preferable purchasing requirement for state agencies.

Product Type: Electronics (televisions, computer monitors, desktop and notebook computers and printers)

DfE Policy Instruments:

- ✓ Green purchasing

DfE Incentive: The law requires the Department of Central Management Services to ensure that "all bid specifications and contracts for the purchase or lease of desktop computers, laptop or notebook computers, and computer monitors, by State agencies under a statewide master contract require that the electronic products have a Bronze performance tier or higher registration under the Electronic Product Environmental Assessment Tool ("EPEAT") operated by the Green Electronics Council."

DfE Result: The program has not yet been launched, therefore no results are available.

A.11 State Product Stewardship Frameworks

Washington, Minnesota and California are all in final stages in proposing product stewardship frameworks. Each have included some language specific to DfE in their framework legislation or recommendations.

State of Washington

Reducing Greenhouse gases in Washington HB 1718- 2009-2001 p. 102, 104

<http://apps.leg.wa.gov/documents/billdocs/2009-10/Pdf/Bills/House%20Bills/1718.pdf>

HB 1718 calls for product stewardship plans to include financial incentives to reward product design that result in improved reuse or recycling and less toxicity where feasible. It also calls for strategies to manage and reduce life cycle impacts of products and packaging, from product design to end-of-life management, including ways to improve designing, packaging, and distributing products.

State of Minnesota

Product Stewardship Recommendations Report, January 2009

<http://www.pca.state.mn.us/publications/lrw-ps-1sy09.pdf>

The Minnesota legislature is currently reviewing recommendations developed by the Minnesota Pollution Control Agency. Recommendation #3 in the report states that a manufacturer/brand owner/importer or a stewardship organization is required to submit a stewardship plan with one of the components stated as:

“Strategies to promote design for the environment (toxicity reduction, recycled content, recyclability, product longevity) for the product as well as any attendant packaging”

State of California

To be released shortly.