

What the Federal Government Can Do to Encourage Green Production

By Nicole Darnall

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In recent years numerous studies and media accounts have discussed how companies that are improving their environmental performance by undertaking green production are reporting significant financial benefits from doing so. While deriving financial benefits is good for business, the environmental benefits of these private actions also can be enjoyed by society. This win-win arrangement raises an important question for the new administration and the 111th Congress: If business opportunities exist from engaging in green production, why aren't all companies pursuing it?

This report identifies six obstacles that discourage most companies from undertaking green production:

- Insufficient federal leadership
- Poor understanding of environmental costs and benefits
- Weak internal coordination
- Organizational inertia
- Poor diffusion of green production best practices
- Consumer and investor inability to recognize and reward green companies

Unless these obstacles are resolved, the vast majority of companies will likely forgo developing a green production program. This report offers recommendations to the new administration and Congress to address these issues. The recommendations are categorized into three themes: strengthening federal leadership, expanding federal initiatives, and establishing a mandatory environmental product label policy.

What Is ‘Green’ Production?

A company's environmental efforts can be classified as either reactive or proactive. *Reactive* environmental efforts

are the actions companies take in order to comply with environmental regulations. These actions are considered reactive because companies are required by law to implement them.

By contrast, *proactive* environmental activities are the efforts companies undertake that are not required by law and that reduce pollution. Green production is a type of proactive environmental activity.

It is a twofold concept that has both an internal and external focus:

- *Internally*, green production involves the improvement of a company's organizational efficiencies by minimizing waste in the production cycle. These efforts can increase profitability in that a company's output remains constant while its cost per unit output falls.
- *Externally*, green production involves addressing the increasing demand for green products and technologies. Such efforts include developing new product concepts that reduce consumer and business-to-business waste.

Types of Green Production Activities

Whether a company focuses its green production efforts internally or externally, its foundation rests on one of three types of activities:

- Pollution prevention
- Product stewardship
- Innovative green technologies

Pollution Prevention

Pollution is the contamination of air, soil, or water by the discharge of harmful substances. Pollution prevention is the reduction or elimination of pollution at the source (source reduction) instead of at the end-of-the-pipe or stack. Pollution prevention occurs when raw materials, water, energy, and other resources are used more efficiently, when



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less harmful substances are substituted for hazardous ones, and when toxic substances are eliminated from the production process. Pollution prevention allows for the greatest and quickest improvements in environmental protection by avoiding the generation of waste and harmful emissions.

Product Stewardship

Like pollution prevention, product stewardship focuses on improving a company's existing products and processes. However, it extends the company's reach by looking beyond organizational boundaries to individuals and organizations that are involved in a product's life cycle. A product's life cycle is its design, development, distribution, use, and disposal or reuse. Companies that undertake product stewardship assess the environmental performance of their products from raw material access, through production processes, to product use and disposal of used products. For instance, in developing 3M's product stewardship program, its Valley, Nebraska, facility recognized an opportunity to reduce its supplier waste. By working with its supplier, shipments now incorporate reusable packaging. The modification reduced shipping waste at this single 3M facility by 8 tons in the first year (see "Product Stewardship at 3M" sidebar on page 88).

Innovative Green Technology

Innovative green technology differs significantly from pollution prevention and product stewardship because it does not focus on improving the company's existing products and processes. Rather, innovative green technologies look toward *unseating* existing products and processes by making them obsolete.

By investing in innovative green technology, companies can reposition themselves in such a way that establishes their role as an industry leader, preempts competitors, and, in some instances, restructures their industry. For instance, by investing in hybrid locomotive technology, General Electric (GE) aspires to do for the locomotive transportation market what Toyota did for the automobile market. By establishing itself as an early market entrant in hybrid locomotive tech-

nology, GE hopes to preempt its competitors and establish itself as a market leader in this area.

Benefits of Green Production

Companies can benefit from green production by:

- Reducing long-term liabilities
- Reducing regulatory costs
- Preempting regulation
- Reducing supply chain risk
- Improving internal efficiencies
- Enhancing market opportunities

Reducing Long-Term Liabilities

The first way in which companies can benefit from green production relates to reducing their long-term liabilities. A long-term environmental liability is a legal obligation to clean up contamination of air, soil, or water due to the intentional and unintentional discharge of harmful substances. By utilizing green production, companies can reduce or eliminate pollution before it is produced. Doing so also can decrease a company's liability associated with its production process.

Reducing Regulatory Costs

Environmental policy regimes that are more heavy-handed have a negative relationship with companies' profitability. Achieving regulatory compliance often requires that companies commit manpower and resources toward obtaining operating permits, treating waste, adopting specific pollution control technology, and monitoring and reporting on specific environmental activities. However, for companies that avoid creating pollution, many environmental regulations would no longer be relevant to them.

Preempting Regulation

Some companies are able to use their green production programs to get ahead of the regulatory curve to such a degree that they can preempt future legislation altogether.

Product Stewardship at 3M

3M has one of the most established pollution prevention and product stewardship programs among U.S. manufacturing companies. In 2005, the program celebrated its 30th anniversary. Overall it has prevented more than 2.6 billion pounds of pollution. In the first year of its program, 3M estimates that it saved \$1 billion.

One example of the types of product stewardship efforts 3M has undertaken is the redesign of the packaging of its Post-it® Flags. The new design reduced waste by doing away with the back card and plastic blister cover from the packaging. These changes eliminate 35 tons of solid waste annually.

The company also is working closely with its suppliers. Its Valley, Nebraska, facility worked with its supplier to change the component packaging to a system where both the containers and input packaging can be returned. This modification reduced shipping waste by approximately 8 tons in the project's first year.

In these instances, companies avoid the risk of more stringent regulation because their pollution is so low that additional regulatory controls would have little effect on their operating procedures.

Reducing Supply Chain Risk

Many companies are relying on their green production programs to more closely manage their supply chain relationships. Such actions help companies avoid inheriting environmental risks from less environmentally conscious suppliers. The global automotive industry is an example of one sector that collectively is considering the environmental attributes of its suppliers to avoid unnecessary environmental risks. U.S. automakers are requiring that their suppliers assess and continually improve their environmental performance. By doing so, these companies are reducing the risk of inheriting environmental problems and minimizing potential long-term environmental liabilities associated with their product inputs.

Improving Internal Efficiencies

Another way in which companies can benefit from green production relates to improving their internal efficiencies and reducing operating costs. When waste occurs, product inputs and natural resources are not consumed entirely in the production process. Waste of any sort therefore represents an inefficiency in the production process or a problem with product design. To the extent that production waste can be reduced, companies can benefit financially.

Enhancing Market Opportunities

Green production also can enhance business innovation. Business innovation has changed significantly in recent years and its pace is increasing. Innovation spans virtually all organizational and locational boundaries, and involves stakeholders rarely considered in the past. These changes create significant opportunities for companies that improve their environmental performance by reducing their

production and legal compliance costs and enter into innovative markets that value green production.

Recommendations for the New Administration and Congress

Strengthening Federal Leadership

Recommendation 1: The new administration should create greater expectations that consumers, investors, and company managers consider the environment in their decision making.

Specifically, the new administration should have open discussions about how different societal actors can take part in addressing global (and local) environmental problems. Additionally, it should raise environmental consciousness. Combined, these efforts can expand market opportunities for environmentally conscious businesses and improve the environment.

Recommendation 2: The new administration should frame the issue in a way that invites corporate-wide interest.

The new administration and the 111th Congress must move beyond the win-lose rhetoric—protecting the environment and enhancing economic prosperity can lead to win-win outcomes. Green production is an opportunity for companies to reduce their liabilities and regulatory pressures, improve their internal efficiencies, enhance market opportunities, and add business value.

Expanding Federal Initiatives

Recommendation 3: The Environmental Protection Agency should develop online environmental accounting tools.

A significant impediment to companies implementing green production programs is knowledge of cost-saving opportunities. The U.S. Environmental Protection Agency

(EPA) should develop online environmental accounting tools to help companies better understand the costs and benefits of green production. Doing so can help companies build a business case for going green.

Recommendation 4: The Environmental Protection Agency should promote the use of environmental audits to help companies diffuse green production practices throughout their organizations.

EPA should encourage companies to use environmental audits. Environmental audits systematically assess how well a company's management practices conform to green production goals and help diffuse green production practices throughout a business organization.

Recommendation 5: The Environmental Protection Agency should develop an approved "template" and encourage companies to use it in their voluntary environmental reporting.

EPA should develop a standardized environmental reporting template to increase the transparency of corporate environmental reporting and allow individuals to compare companies' environmental attributes.

Recommendation 6: The Environmental Protection Agency should expand technical assistance offerings to encourage more companies to undertake green production programs.

Since many company managers mistakenly believe that developing green production programs is too costly, EPA should expand its technical assistance offerings to decrease the "risk" associated with developing a green production program.

Establishing a Mandatory Environmental Product Label Policy

Recommendation 7: The new administration and the 111th Congress should consider establishing a mandatory environmental product label policy.

Like nutrition labels on food, which have influenced consumers to assess the composition of the food, environmental

labels would equip consumers with information to scrutinize the environmental footprints of the products they purchase. Product labels should be *mandatory, multidimensional, comprehensive, standardized, and government developed* in order to be effective. The success of an environmental product labeling policy rests on whether or not interested parties believe the information disclosed on the label is credible.

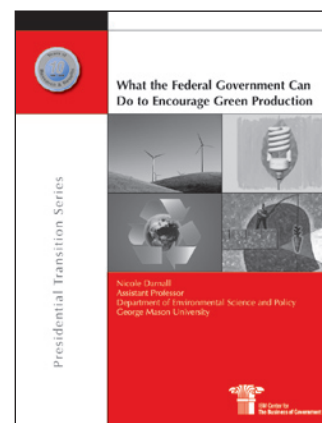
Conclusion

In sum, economic prosperity need not be at odds with the environment. Businesses are investing significant resources in green production programs and benefiting financially by doing so. However, six obstacles discourage most companies from undertaking green production. By strengthening federal leadership, expanding federal initiatives, and establishing a mandatory environmental product label policy, significant strides can be made toward encouraging more widespread use of green production within U.S. business, while at the same time improving the nation's natural environment. ●

TO LEARN MORE

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The report can be obtained:

- In .pdf (Acrobat) format at the Center website, www.businessofgovernment.org
- By e-mailing the Center at businessofgovernment@us.ibm.com
- By calling the Center at (202) 515-4504
- By faxing the Center at (202) 515-4375