

## **International Symposium on Electronics and the Environment And Electronics Recycling Summit**

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Remarks by John Howard, Federal Environmental Executive

Thank you for including me in the Fourth Electronics Recycling Summit.

### **Remembering our Successes, Focusing on the Challenges**

We live in an incredible time in our nation's and the world's history. And as we gear ourselves up for climbing the tall mountain of challenges ahead of us, it's important that we also remember the mountains we have already scaled.

We have made significant environmental progress over the last 30 years. Today, we know that environmental improvement and economic growth go hand in hand. For example:

- Since 1970, our economy has grown about 150%.
- During that time, emissions of key air pollutants are down about 30%, and continue to decline.
- More than 90% of all public drinking water systems today are safe, up significantly, and continuing to improve.
- Our energy use has grown at one-fifth the rate of our economic growth.
- Renewable energy generation has grown about 30%.
- And our health is improving – life expectancy is a record 77.2 years – our national mortality and infant mortality rates are at all-time lows – and cancer and heart disease mortality continue to fall.

And yet we still face many environmental challenges – including electronics. To maintain this progress, to tackle the problems we have not yet been able to solve, and to start thinking and acting sustainably, we have to do things differently – we have to modernize our pollution control systems, use advanced technologies, adopt innovative practices, work together as a team, and integrate policies and solutions across traditional disciplines.

## Sustainability in the United States

We've been hearing about this lofty goal of sustainable development and sustainability now for nearly two decades – but the question remains, can we define it well enough to really know how to do it.

I believe we can define it enough to know it really is here to stay – and that we don't need to get hung up on the particulars of the word “sustainability” or any other term. Instead, we should focus on the underlying principles. If we do, we see that – although we may not all be using the same exact wording – sustainable development actually has a very strong position in the US.

Many of you probably have heard plenty about what Europe and Asia are doing on sustainable development but rarely read in the papers or see on TV about what the US is doing. In fact, we're doing plenty, but we aren't bragging about it or, in many cases, even calling it that. Although the term “sustainability” may not commonly be used in America, the underlying concepts are an integral part of America's vision for the future. The bottom line is that the policies and practices are more important than the terminology, and there are many examples of sustainability in the US government's agenda.

To radically cut air pollution and save long-term costs, President Bush has proposed his Clear Skies legislation that would cut NOx, SOx, and mercury from power plants by 70 percent (by 2018). Others in Congress have similar plans to cut power plants' emissions.

We believe the best way to address climate change and best achieve social, economic, and environmental gains is by promoting energy efficiency and new technologies. For example, President Bush is promoting hydrogen fuel cell technologies. As you probably heard in his State of the Union speech, he is urging Congress to invest \$1.7 billion over the next 5 years for research on hydrogen fuel cells and infrastructure. And we're working with the private sector and countries around the world to leverage that investment and accelerate our progress.

We're looking at the social and economic legs of sustainability, too. To improve reading skills, which many now call the “new civil right,” the President and Congress worked together to promote improved performance through the No Child Left Behind legislation. The President and Congress are working to help ensure a strong economy and to improve Americans' health care. President Bush has proposed an incredible array of volunteer efforts to boost everything from the Peace Corps to local mentoring. And much, much more.

Around the world, we believe sustainable development is dependent on the existence of a stable, peaceful, and secure state that respects human rights, combats corruption, supports the rule of law, opens markets, and promotes

private enterprise. To meet developing nations' needs and meet the problems of formerly wasted billions of dollars in foreign aid, President Bush has proposed a Millennium Challenge Account that offers more money (\$15 billion, up \$5 billion, by 2006) in return for results and accountability. If they don't make timely improvements, the money will move to others. He's taking the same approach with HIV/AIDS, proposing to spend \$15 billion over the next 5 years on prevention and treatment in Africa.

Growth and sustainable development cannot depend solely on aid, of course. Private sector investment and free trade are critical. And so we've worked, successfully, these last two years to ensure – in several key trade and development agreements – that countries embrace, or at least accept, that private sector investment, public-private partnerships, good governance, accountability, and free trade are essential for sustainable development.

Stability, growth, and a healthy environment in developing countries are important for all of us. Accountability with taxpayers' money is important not just with our foreign spending but also with our domestic spending. To reach for sustainability, we first must be more efficient and able to measure our performance and progress. In the 2004 budget he submitted to Congress, President Bush stated: "We will continue to focus on getting results from federal spending. A federal program's measure of success is not its size, but the value it delivers."

### **Office of the Federal Environmental Executive**

As the federal government moves forward to improve its own performance, that includes environmental and energy issues, as well – which is what my office focuses on. President Bush has said that the federal government should lead by example, be a good neighbor, and be a good steward of our resources.

I've now had the privilege of working for President Bush for nearly seven years. I have seen his commitment to improving our quality of life, a strong focus on actually getting better results, a willingness to encourage innovation, and a personal ethic of stewardship – from making sure that the Texas Governor's Mansion was one of the first Austin facilities to sign up for the City's new renewable energy program – to his sustainably designed ranch house with its geothermal heating and cooling system and rainwater cistern – to the recent installation of the White House's first-ever solar electric system.

My position was initiated by the first President Bush to boost recycling within the federal government. President Clinton expanded that to do more on "green" purchasing. President Bush has now tasked me with expanding the office's mission and activities.

Our mission now is to promote sustainable environmental stewardship throughout the federal government. To help facilities improve their environmental compliance and performance, we have six priority action areas: our historical core missions of recycling, waste prevention, and green procurement; electronics stewardship; industrial ecology; sustainable buildings; and the strategic framework for all of this, environmental management systems.

In addition to offering training, education, guidance, best practices, and support, we also are trying to improve accountability through the use of scorecards. For example, the last Administration developed a set of sustainability indicators, and this White House is working to further refine and, most importantly, actually use them to measure and improve performance.

Our office issued a report to the President, with scorecards, last year, on how the federal government is doing in the energy and environmental arenas. By pulling together this information, we found that:

- We're progressing toward our goal of having all major federal facilities implement an environmental management system (EMS) by December 2005. To date, 19 federal facilities are registered to ISO14001 and another 200 are actively developing EMSs.
- Total carbon emissions from federal facilities dropped 2.8 million metric tons over the last decade – like removing 2.1 million cars in a year.
- We've cut our energy intensity (BTUs per square foot) by nearly one-quarter (23%) since 1985, saving taxpayers \$1.4 billion.
- And just in the last two years, we've tripled our purchase of electricity from renewable energy sources, to 632 gigawatt hours, enough to serve 60,000 households for a year.

The report also makes 18 recommendations for the federal government to improve its stewardship by building partnerships and enhancing education, improving accountability, budgeting for sustainability, building sustainable infrastructure, and continuing leadership.

One of those recommendations specifically tasked our office with working with EPA, other agencies, and leading electronics businesses to pursue a national electronics stewardship challenge, inviting federal agencies to commit to using their acquisitions to leverage the development of an integrated approach to the design, manufacture, de-manufacture, reuse, and recycling of electronic equipment. So that, at long last, is why I'm here today.

## **Electronics**

The worldwide revolution in electronics has certainly impacted the economy and our lifestyles, and it also is impacting the environment. By making information exchange quicker and easier, we reduce our need to move people, products, and information by conventional means and so can cut traffic, save energy, and reduce pollution. But waste electronics are the fastest growing waste stream in the U.S., the recycling rate is low, and electronics contain various chemicals and heavy metals that could pose environmental risks.

Governments, businesses, and non-governmental organizations are all interested in finding ways to better handle this waste stream. For FY2003, the federal government has budgeted approximately \$50 billion for IT products and services – and that figure will only continue to grow. We have an opportunity, and a responsibility, to provide leadership in environmentally sound practices and cost-effective, life-cycle management of our electronic assets.

The U.S. federal government is actively seeking solutions to this concern – recognizing that this issue ranges from the product's design and manufacture, through its use and reuse, through recycling, and on to its ultimate disposition. We're working to tackle this important issue in each of an electronic product's life steps.

## **Design**

The first step is the product's design. Can a product from its inception be created to have less of an environmental impact on the environment throughout its life, and still meet its maker's and consumers' cost and performance demands? The goals could include reducing toxicity, reducing energy use, streamlining product weight and materials, identifying opportunities for easier reuse, and more.

EPA's Design for the Environment (DfE) Program has formed several successful partnerships with the electronics sector. The DfE Computer Display Partnership evaluated the life-cycle environmental impacts of cathode ray tube (CRT) and active matrix liquid crystal display (LCD) technologies, finding that the CRT technology has greater impacts than the LCD technology in all but two impact categories (eutrophication and aquatic toxicity). The DfE Printed Wiring Board Partnership conducted two cleaner technologies substitutes assessments, identifying cleaner alternatives for various manufacturing processes. The DfE Lead-Free Solders Partnership is now working to conduct a life-cycle assessment of tin-lead and several leading lead-free solder candidates, including the leachability of each and the impact of lead-free solders on recycling and reclamation at the end of the product's life.

As an outgrowth of the Western Electronic Product Stewardship Initiative (WEPSI), EPA Region 10 and a team of others are working to develop an electronic product development assessment tool (EPEAT) to help purchasers identify environmentally preferable products and help manufacturers receive a market advantage for their environmentally preferable designs.

And EPA has joined with McDonough Braungart Design Chemistry to launch a cradle-to-cradle design challenge for e-commerce shipping packaging and logistics, which entry deadline is August 15, 2003.

### **Green Procurement**

Through various statutes, presidential executive orders, and policies, the federal government works to buy a range of “green” products, including recycled-content, energy efficient, biobased, and environmentally preferable products – and electronics are part of this mix. The federal share of the electronics market is large enough to give us the chance to help shift the traditional procurement strategies to integrate more environmental consideration during the acquisition and phase. Several federal facilities and agencies are exploring “greener” contract specifications for their electronics. And with EPA funding, the Product Stewardship Institute earlier this month issued its new guide for government procurement officials on purchasing environmentally preferable computers.

### **Use**

We’re working on how to better use our electronics. Computer monitors alone use over 60% of a computer system's energy. By enabling the Energy Star features on a monitor, using a dark screen saver, and turning off a monitor during long periods of non-use, energy usage can be cut significantly. The Department of Energy (DOE) has developed software that helps operations ensure that the energy saving devices on their systems are enabled.

DOE and EPA are setting energy efficient standards and issuing Energy Star labels for additional electronic equipment. And President Bush’s Executive Order 13221 requires federal agencies to purchase products that use no more than one watt in their standby power-consuming mode, which standard is now being adopted by many around the world.

### **Reuse and Recycling**

Many electronics have great value and should be reused or, where, obsolete, recycled. In the federal government, electronics no longer needed by one person must go through screening to see if someone else could use them. Under Executive Order 12999, agencies can transfer surplus computer equipment to schools, educational nonprofit organizations, other agencies, and states.

The Department of Defense has initiated the Demanufacturing of Electronic Equipment for Reuse and Recycling (DEER2) project to investigate, test, and deploy technology upgrades in the public and private sectors to encourage electronic equipment reuse and recycling.

EPA has several initiatives to promote electronics reuse and recycling. Its proposed CRT Universal Waste Rule – which conditionally exempts CRTs from

hazardous waste rules if they're destined for recycling – is an important step towards helping encourage the reuse and recycling of CRTs. The rule should be finalized in early 2004.

EPA's "e-cycling" pilot collection events in the Mid-Atlantic states (Region 3) are helping to raise awareness and increase electronics reuse and recycling. Government and industry have shared the cost to collect, transport, and process the equipment collected during these special e-Cycling events.

And to build on the success of the regional pilots, EPA recently kicked off its "Plug-In to eCycling" campaign as part of its Resource Conservation Challenge (which seeks to meet the national recycling rate to 35% and cut by 50% the generation of 30 different chemicals, by 2005). Through this new voluntary public/private initiative, EPA, manufacturers, retailers, recyclers, local governments, states, trade associations, and non-profits are working together to boost the safe collection and recycling of electronics nationwide. With the National Recycling Coalition, a new web site helps people locate collection and recycling facilities. On June 26, those interested in helping shape this new initiative are invited to meet at EPA headquarters. Thank you to Best Buy, Sony, Recycle America, AT&T Wireless, Panasonic, Dell and others who already have signed up for the Plug-In partnership.

## **Disposition**

Much of the current thinking and work on electronics involves discouraging disposal of certain materials, which can continue around the cycle and change the next product's design. For example, both California and Massachusetts have banned the landfilling of CRTs, and EPA is working with the University of Florida to determine if electronic equipment can be characterized as hazardous.

EPA has issued guidance on the applicability of federal waste laws to the disposition of electronics, and EPA is offering electronic equipment management and compliance assistance workshops.

Under the National Electronics Product Stewardship Initiative (NEPSI), EPA and representatives from industry, government, and non-governmental organizations, are trying to develop a shared national system to finance the collection and recycling of electronics. And to join what EPA's Marianne Horinko said earlier this month, I agree that all of us cannot afford to wait for this process much longer – we need the stakeholders, who will be meeting again in June, to agree to a solution and move forward. If that does not happen, then the several states that now are exploring the imposition of up-front fees will try to move forward to ensure safe collection and recycling of electronics at least within their borders.

The federal government is considering a government-wide contract that would ensure e-waste is handled in an environmentally sound manner. And we are preparing the needed implementing RCRA legislation to forward to Congress so that the U.S. can finally ratify the Basel Convention.

## **Federal Electronics Challenge**

In sum, the federal government already is doing a lot to improve the stewardship of our electronic assets – and we know we can do more. To ensure that the federal government leads by example and uses its buying power to promote environmental stewardship, I am pleased to announce that we are developing a Federal Electronics Challenge. Through the Challenge, we will work to reduce the overall environmental impacts of the federal government's electronic assets by using an integrated approach to federal purchasing, use, and end-of-life management. The Challenge will be offered to those facilities or agencies who want to purchase greener electronics products, manage their electronic assets in an environmentally sound manner, receive assistance to change their current practices, and gain national recognition for their efforts.

The FEC is the first concrete action taken by the team of federal agencies that has agreed to work together under a memorandum of agreement. The FEC's initial sponsors are the OFEE, EPA, the Department of Defense, the General Services Administration, and the Federal Network for Sustainability.

We're starting with a pilot phase, which we'll kick off next week in Portland with the Federal Network for Sustainability. During the pilot phase, we will be working with existing partnerships and industry, purchaser, recycler, non-profit and academic stakeholders to gather input and information to help identify ways to create more incentives, lower costs, and increase environmental protection. The pilot facilities will receive technical assistance to establish baseline measurements, feasible goals, and reporting mechanisms.

So, at this time, we are looking for several partners: federal agencies, to participate in the pilots; OEMs and product designers, to help with enhancing product environmental performance and provide documented information about product environmental performance; recyclers, to identify best management practices; and NGOs and academic institutions, to provide documented information about opportunities.

Once we have completed the pilots and developed the appropriate program, based on the pilots and working with stakeholders, we expect to roll out the national FEC in 2004. Along the way, you can follow the Challenge's progress by going to our website: [www.federalelectronicschallenge.net](http://www.federalelectronicschallenge.net). We look forward to working with you to develop and implement this initiative and make it a big success.

## **Conclusion**

Of course, many other initiatives and partnerships are forming to address this broad range of important issues. For example, many producers now offer

recycling services to their customers (for a range of fees) in the U.S. And the IAER and others are increasingly focusing on the opportunities – and hurdles – involved in recycling the electronics wastestream, as evidenced by your 2003 industry report.

In conclusion, I am optimistic that soon consumers and businesses in the U.S. will be able to purchase electronics that have been designed with fewer toxics, greater energy efficiency, and improved reusability – and that will at the end of their useful life be easily returnable at convenient, inexpensive outlets so they can be reused and recycled in an environmentally safe manner and with a robust market for those materials.

Thank you for all that you are doing to improve the stewardship of our electronic assets, and I look forward to working with you in the Federal Electronics Challenge.