



## **Report Calls for Better Labeling of Bioplastics**

The European Commission's DG Environment's news service, Science for Environment Policy, has published a new report which outlines a roadmap for environmentally-friendly plastic design and the development of biodegradable plastics, as well as policy options to maximize benefits.

With such an enormous volume of plastic product sold on the world's markets, an inevitable knock on consequence is an equally huge volume of plastics entering the waste stream, or in some cases escaping the waste stream and entering the environment, said the report.

One particular concern raised was 'plastic soup', which exists in the world's oceans and seas, containing everything from large abandoned fishing nets to plastic bottles, to miniscule particles.

However, according to the report, the redesign of plastic products, both at the scale of the individual polymer and in terms of the finished product's design, could help alleviate some of the problems associated with plastic waste. The authors claimed that thoughtful development and redesign could have an impact at all levels of the hierarchy established by the European Waste Framework Directive: prevention, re-use, recycle, recovery and disposal.

### **Findings**

- The redesign of plastics and bioplastics has the potential to decrease plastic waste, fossil fuel use and CO<sub>2</sub>emissions
- More agreement is needed on the use of Life Cycle Analysis (LCA) to assess the environmental impact of bioplastics and redesigned plastics and LCAs need to focus more on end-of-life analysis
- Clearer definitions and better labeling on the new breeds of plastics are required as well as improved public communication
- Local and national assessments of the impacts on waste management infrastructure are needed
- Research is needed into the critical mass required to make bioplastics affordable and to identify the most appropriate plastics to substitute.

### **Redesigning plastic**

One of the key areas in the development of more environmentally friendly plastic products occurs at the chemical level. According to the report plastics currently consume around 8% of world oil production, 4% as a raw material and 3% to 4% as energy for their manufacture. Substituting petroleum for bio-based raw materials could potentially reduce fossil fuel use, and result in plastic wastes that are less persistent in the environment. In addition, the report finds that more careful design at product level could help to improve recycling rates.

According to the study, the redesign of polymers and plastic products is happening now. It said that while bioplastics are already on the market, the use is small (0.1% to 0.2% of total EU plastics). Furthermore, the technology to produce them on a large scale is still in its infancy and so is the research on their impacts.

Biodegradable plastics decompose through the action of micro-organisms to produce a humus-like material, along with water, carbon dioxide and/or methane. Decomposition can occur aerobically through composting or anaerobically in landfills.

While standards on biodegradability, compostability and recyclability do exist and labels have been created, for example, the EN13432 compliant compostability label, the report highlighted the fact that not all bio-based plastics are biodegradable. It later called for clearer certification and labelling schemes to ensure the public understand the terms biodegradable, compostable and eco-friendly.

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### **U.S. Government Launches Waste Electronics Strategy**

The U.S. government has launched its National Strategy for Electronics Stewardship, which provides recommendations on steps the Federal government, businesses and citizens can take toward tackling the problem of used electronics. It is to target the goals identified by President Obama, of protecting human health and the environment from the potentially harmful effects of the improper handling and disposal the almost 2.5 million tons (2.27 million tonnes) of used electronics that is discarded in the U.S each year.

The announcement also included the first voluntary commitments made by Dell, Sprint and Sony to the U.S. Environmental Protection Agency's (EPA) industry partnership, aimed at promoting the environmentally sound management of used electronics.



The recognition of the need to use of certified recyclers has been welcomed by the industry

According to the administration, the strategy will:

- Promote the development of more efficient and sustainable electronic products
- Direct Federal agencies to buy, use, reuse and recycle their electronics responsibly
- Support recycling options and systems for American consumers
- Strengthen America's role in the international electronics stewardship arena.

Under the strategy, the EPA and the General Services Administration (GSA) will remove products that do not comply with energy efficiency or environmental performance standards - from the information technology purchase contracts used by Federal agencies, and will ensure that all electronics used by the Federal government are reused or recycled properly.

## **Standards**

In addition, the GSA said that it will promote the development of new environmental performance standards for categories of electronic products not covered by current standards. Several Federal agencies will work together to identify methods for tracking used electronics in Federal agencies to move toward reuse and recycling.

Key components of this strategy include the use of certified recyclers, increasing safe and effective management and handling of used electronics in the United States and working with industry in a collaborative manner to achieve that goal. As a first step in this effort, EPA Administrator Lisa P. Jackson has signed a voluntary commitment with Dell Inc. CEO Michael Dell and Sprint CEO Dan Hesse to promote a U.S. based electronics recycling market. Representatives of Sony Electronics also committed to improving the safe management of used electronics.

According to the EPA, the collaboration with industry is aimed at encouraging businesses and consumers to recycle their electronics with certified recyclers, and for electronic recyclers to become certified. There are two existing domestic third-party certification recycling entities, R2 and E-Stewards, and the electronics recycling industry is increasingly embracing these programs.

"A robust electronics recycling industry in America would create new opportunities to efficiently and profitably address a growing pollution threat," said Jackson.

## **Reaction**

John Shegerian, co-founder, chairman and CEO of Electronic Recyclers International (ERI) welcomed the announcement, and was encouraged to see the Federal government leading the way by establishing a policy to utilize only certified recyclers for its electronics processing, increase U.S. jobs, and reduce harm from U.S. exports of e-waste.

"As an R2 and e-Stewards certified company, ERI supports the safe handling and recycling of electronics here in the U.S. and abroad and looks forward to working with the Federal government in promoting scientific and technological developments to improve the electronics recycling process and maximize the recovery of valuable materials from discarded electronics," he explained.

Meanwhile, Willie Cade, CEO, PC Rebuilders & Recyclers was also optimistic about the strategy's potential to create jobs in the U.S.: "This will prove to be a very successful jobs creation and

sustainability or 'Green' program...This is the first comprehensive sustainability strategy in our nation's history," he added.

Robin Wiener, president of the Institute of Scrap Recycling Industries (ISRI) commented on the Federal government's position as the largest source of used and end-of-life electronics, and its commitment to lead by example in ensuring that it is the nation's "most responsible" consumer of electronics.

"We are encouraged by the Obama Administration's flat dismissal of burdensome and overreaching legislation that would ban exports and pull the rug out from under an industry that continues to create jobs and contribute to both the U.S. and global economy," he said.

#### **in brief**

##### **U.S. Study to convert landfill gas to hydrogen**

BMW has launched the first phase of a program to validate the economic and technical feasibility of converting landfill gas into hydrogen.

BMW's manufacturing plant in South Carolina is using hydrogen fuel cells to power nearly 100 material handling vehicles. If this is successful, follow-up phases of the project will provide infrastructure to use hydrogen to fuel the company's entire fleet of material handling equipment.

##### **UK: Waste to Energy Facility Given Go-Ahead**

A 269,000 tonne capacity waste to energy facility has been granted planning permission near Ipswich, UK. The Environment Agency has issued the necessary draft permit for the site – effectively giving SITA UK the green light to proceed. Building work is due to start later this year and the plant is expected to be operational by December 2014.

The 25-year contract will be awarded by Suffolk County Council.

##### **GM and ABB Demonstrate Battery Re-Use**

General Motors and ABB Group have offered a potential solution to the problem of what to do with the lithium-ion battery packs used in a growing number of electric and hybrid vehicles, as those vehicles reach the end of their lives.

According to GM, the battery packs used in its Chevrolet Volt will have up to 70% of life remaining after their automotive use is exhausted. Earlier this year, GM signed a definitive agreement with ABB Group, a power and automation specialist, to identify joint research and development projects that would reuse the Volt's battery systems.

The partners claim to have demonstrated an energy storage system that combines electric vehicle battery technology and a grid-tied electric power inverter. The companies are building a prototype that could lead to battery packs storing energy, including wind and solar energy, and feeding it back to the grid.

The system could store electricity from the grid during times of low usage to be used during periods of peak demand, saving customers and utilities money. The battery packs could also be used as back-up power sources during outages and brownouts.

- Turn to page 41 to read a summary of the report 'Recycling of Li-ion Batteries: Trends and Challenges of the Future.

### **Scrap Industry Worth \$90 Billion to U.S. Economy**

The economic and environmental impact of the scrap recycling industry in the U.S. has been highlighted in a report from the Institute of Scrap Recycling Industries (ISRI).

The study, undertaken by John Dunham and Associates and commissioned by ISRI looks at different kinds of economic activity such as jobs and exports, at the national, state and congressional district levels. According to ISRI, the economic analysis shows that the industry creates over 137,000 direct jobs, rising to more than 459,000 jobs when the wider economic impacts are taken into account. In addition, the industry generates \$10.3 billion in tax revenues for governments across the U.S. as well as delivering environmental benefits.

The industry also generates significant export revenue for the U.S. The report claimed that approximately 34% of the scrap materials processed in the United States are exported to over 155 other countries for manufacture into new products. This generates nearly \$30 billion in export sales, significantly helping the U.S. balance of trade.

The total economic activity generated by scrap recycling in the U.S. exceeds \$90.6 billion, according to ISRI, making the industry similar in size to the nation's forestry and fishing industries combined.

#### **in brief**

##### **U.S. Investment in New E-Waste Facilities**

Garb Oil & Power Corporation has formed a joint venture with ACG Consulting to build seven e-waste recycling facilities within the next three years, with the first planned to break ground in South Florida in March of 2012. Garb said that it intends to start work on a new e-waste recycling facility every four months thereafter, at various sites in the U.S.

##### **Haiti: Recycling Enterprise Initiative Launched**

A 'cash for recyclables' program has been launched in Port-au-Prince, Haiti. The social enterprise project - Ramase Lajan - which means 'picking up money,' will expand the collection of plastics to create permanent jobs through a network of independently owned and operated neighbourhood collection centres. The initiative has been launched by Executives Without Borders, in partnership with CSS International Holdings and Haiti Recycling.

##### **UK Wood Waste Down as Demand Rises**

Largely due to reduced activity in the construction industry, wood waste arisings in the UK have fallen by 10% since 2007, according to the Waste & Resources Action Programme's (WRAP) recently published Wood Market Situation Report.

Arisings from the construction industry showed a 13% decrease, while arisings from the furniture and joinery sectors fell by 23% and total arising fell from 4.5 million tonnes to 4.1 million tonnes between 2007 and 2010.

However, WRAP said that an increase in the amount of wood waste being used in the biomass sector has more than doubled over the same period to 500,000 tonnes in 2010. The total amount of wood waste recycled or used in energy recovery in the UK increased to 2.3 million tonnes in 2010 – more than half of all wood waste arisings. Exported wood waste has also increased, rising to almost 200,000 tonnes in 2010.

A combination of these factors has been reflected in lower gate fees for wood recyclers since early 2009. The report claimed that while recovered wood arisings are likely to grow gradually as the economy recovers, rising demand may put further downward pressure on gate fees.



Growing demand and falling supply have led to lower gate fees  
Credit: WRAP

Marcus Gover, director of the Closed Loop Economy at WRAP, said: "It's easy to put the decrease in wood waste arising down to a reduction in construction activity during the recent economic downturn, but it's also important to note that the construction industry – one of the biggest contributors to wood waste arising – has also taken proactive steps to reduce the amount of wood they send to landfill."

According to WRAP, the introduction of site waste management plans in April 2008 requires construction companies to plan, monitor and measure the waste generated on site, as well as industry commitments such as Halving Waste to Landfill, launched by WRAP in 2008, have also had an impact.

Original URL: <http://www.waste-management-world.com/index/display/article-display/3938031925/articles/waste-management-world/volume-12/issue-4/regulars/news/report-calls-for-better-labelling-of-bioplastics.html>