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HP Policy Position

Environmental Sustainability

At HP, we create technology that makes life better for everyone, everywhere. Our commitment to sustainability is a powerful force for innovation in our business, pushing boundaries of energy efficiency and alternative energy use, ecological design and responsible product lifecycle management. HP advocates for prioritizing energy efficiency in government procurement, addressing climate change, promoting responsible and consistent materials and chemical use policies, and propelling the circular economy and responsible end-of-life electronics handling.

HP's Policy Recommendations

Energy Efficiency

- Energy efficiency regulations and standards should follow a harmonized, global approach. HP encourages leveraging voluntary programs such as ENERGY STAR,® the Electronic Product Environmental Assessment Tool (EPEAT) and the Voluntary Agreement on imaging equipment in the European Union.

Sustainable Public Procurement

- Governments can demonstrate environmental leadership in procurement by selecting highly energy-efficient IT products and analyzing total cost of ownership. We also encourage acceptance of manufacturer declarations over specifying eco-labels in public procurement and support harmonization or mutual recognition of standards-based eco-label performance criteria.
- We strongly discourage preferences for remanufactured/refilled printing supplies over original manufacturers, as this approach does not consider the improved quality, total value, and overall lifecycle sustainability that original products provide. Remanufactured cartridges are typically not recyclable/recycled, and should be subject to takeback regulations where print cartridges are in scope.

Climate Change

- HP supports national governments' commitments to the Paris Agreement and participation in the United Nations Framework Convention on Climate Change (UNFCCC). We encourage actions by all countries to enact policies to mitigate climate change and help transition to a low carbon economy that are guided by technologically and economically feasible targets based on the best available science. We support market-based approaches that provide transparency and accountability, promote innovative technologies to lower carbon footprints (such as the Internet of Things and additive manufacturing), and encourage renewable energy sources.

Circular Economy

- HP recognizes that a sustainable economy will be a circular economy, with products that last longer, extend life through increased durability, repairs, and more effective recyclability. Purchasers will drive the move to circularity through sustainable public procurement and harmonized sustainability criteria as opposed to regulation.
- With our Instant Ink, Managed Print Service, and Device as a Service offerings, HP is delivering innovative print and computing solutions based on real-time needs. We believe that purchasing goods as a service will provide the incentives for design that will extend product lives, serviceability, and the elimination of material consumption.

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Additive manufacturing/3D Printing

- 3D printing will generate new opportunities to reduce manufacturing costs, carbon emissions production, energy usage and resource consumption by better matching supply and demand. Current regulatory frameworks are sufficient to address 3D printing sustainability issues, including existing regulations governing chemicals use, emissions/air quality, waste management and health and safety.

E-Waste and Product Recycling

- We encourage responsible legislation on collection and recycling of used electronics that take into account shared responsibilities, measurement of waste flows, workable flow systems, harmonized recycling standards and fair allocation of obligations.
- HP engages with governments to help improve national and international legislation governing the movement of electronic waste. We strongly support the updated language adopted by the Basel Convention that recognizes the appropriate movement of nonworking products between countries to allow for proper repair or responsible recycling, and encourage countries to adopt this approach.

Chemicals Management and Restrictions on Hazardous Substances

- HP is dedicated to reducing the environmental and human health impacts of materials and chemicals throughout our supply chain. We support the goal to restrict substances of concern and responsibly manage chemicals, such as under the updated U.S. Chemical Safety for the 21st Century law, EU Restriction of Hazardous Substances Directive (RoHS) and Registration, Evaluation, Authorization, and Restriction of Chemical Substances (REACH) and encourage countries to harmonize approaches. Chemical and substance restrictions must be science-based and consider the availability of workable alternatives in setting implementation timeframes.
- We believe that producers should strive to use better materials and chemicals in their products. It is sometimes necessary to identify chemicals to “black list” and restrict from products, but the long-term roadmap for blacklisting chemicals must be established and stabilized so that material restrictions do not constrain the circular economy. Equally important, “white list” chemicals can be identified and encouraged as substitutes using tools such as the Green Screen™ for Safer Chemicals, so that producers are not forced to jump from one problematic chemical to another.

Issue Background

Energy Efficiency

We encourage a harmonized, global approach to energy efficiency regulations and standards. HP is an active contributor to ENERGY STAR® standards development and updates for IT products, collaborating with the U.S. Environmental Protection Agency and Department of Energy. HP contributed to the development of the Electronic Product Environmental Assessment Tool (EPEAT®) standard for imaging and printing products with other technology stakeholders and the Green Electronics Council.

HP played a lead role in the voluntary agreement (VA) on imaging equipment that covers 96% of the EU market and secured approval from the European Union. HP and 15 other large manufacturers established the VA in 2011 to address the environmental impact of imaging equipment (copiers, printers and multifunctional devices). The VA includes a manufacturer commitment to the latest ENERGY STAR® criteria and establishes a set of formal guidelines to allow customers to make more sustainable purchasing decisions, with accurate information on energy and resource efficiency, paper use and consumables disposal and treatment.

Sustainable Public Procurement

HP supports sustainable public procurement policies. Our Sustainable IT Purchasing Guide¹ outlines key considerations for green procurement:

- 1.) fairness and equitability, taking into account environmental lifecycle while treating all suppliers fairly
- 2.) harmonization and recognition of International standards
- 3.) science-based material restrictions
- 4.) prioritization of selection criteria
- 5.) environmental criteria that are measurable, comparable and verifiable
- 6.) process transparency
- 7.) compliance verification through self-declarations over eco labels

The current global eco-labeling system is severely fragmented. HP and others in the IT industry are advocating several measures to improve the meaningfulness of the system, such as: criteria harmonization, science-based criteria, mutual recognition arrangements between different labels, simplified application procedures, and better impact assessments by the eco label organizations. In the meantime, we strongly encourage acceptance of manufacturer declarations, such as the IT Eco Declaration, based on the ECMA-370 standard.

Procurement policies and tenders that favor remanufactured or refilled printing supplies do not take into account the lower quality and additional hidden costs compared to original manufactured products. In fact, 70% of the print quality is determined by the printer cartridge.² Remanufacturers do not generally manage take-back and end of life, and should be subject to takeback regulations that have print cartridges in scope. Contrary to popular belief, third-party remanufactured and refilled cartridges are not environmentally preferable to original manufacturer cartridges under a full life cycle assessment. Original manufactured products provide better overall quality and reliability, total value, and sustainability over the full life cycle, from design to take-back and recycling. Most original manufacturers adhere to “zero landfill” practices for all cartridges and manufacture our products under the strictest environmental health and safety standards.³

Remanufactured cartridges may not carry the same environmental certifications (e.g., eco labels), and overall system benefits that many customers expect. In addition, remanufactured cartridges are typically not recyclable and recycled, whereas, original cartridges can be effectively recycled and plastics from that process can be used in the manufacture of new cartridges. Further, the remanufactured industry is fragmented and may not have the same high standards for working conditions and environmental protocols for their manufacturing sites.

Climate Change

At HP, we are innovating to mitigate the effects of climate change and adapting to an evolving global business and regulatory environment. We recognize that our customers and investors expect us to take action on sustainability.

HP supports individual governments' commitment to the Paris Agreement and participation in the United Nations Framework Convention on Climate Change (UNFCCC). Efforts to address climate change must be global, but differentiated, particularly for developing countries. HP supports approaches that encourage actions by all countries.

Policies to mitigate climate change and support a transition to a low carbon economy should be guided by technologically and economically feasible targets based on the best available science. Market-based mechanisms with clear, transparent and consistent price signals offer the best hope for creating innovation and competition over the long term. Both nations and businesses must implement greater transparency in tracking and reporting greenhouse gas (GHG) emissions to measure progress, make necessary course corrections, and promote shared accountability.

Renewable energy sources should be encouraged as a critical part of the solution, with policies that promote choice in procurement and access to cost competitive options, flexible financing and contractual terms, simplified policies, and access to projects that reduce emissions beyond business as usual (as outlined in the corporate buyers' [regulatory principles](#)).

HP has a long legacy of environmental leadership and a demonstrated commitment to climate action that is recognized by three consecutive years on the CDP Climate A List and five consecutive years on the Dow Jones Sustainability World Index. We have committed to the following goals:

- Commit to 100% renewable electricity in our global operations with 40% by 2020 (signatory to [RE100](#))
- Achieve zero deforestation associated with HP brand paper and paper-based product packaging⁴ by 2020
- Reduce the GHG emissions intensity of HP's product portfolio by 25% by 2020, compared to 2010⁵
- Reduce the GHG emissions from HP's global operations by 25 percent by 2025, compared to 2015

We also work closely with our supply chain partners to help them reduce energy use, greenhouse gas emissions, and costs through programs that promote energy efficiency practices. In fact, we reduced our overall carbon footprint by 11% from 2014 to 2015, and met reduced emission goals for supply chain and operations more than five years ahead of schedule.

Circular Economy

Across industries worldwide, companies are adopting a more sustainable approach that is intentionally restorative and regenerative, incorporating designs that eliminate waste. Following this circular “make, use, return” model, companies design products and systems to continually recover and reuse materials. Further, we provide extensive support to extend our products' lives through repairs, and encourage regulatory frameworks that allow us to do so. Transitioning purchasing from a transactional model to a service model will also tighten the linkage between product design and value recovery at the end of the first product life and beyond.

HP is driving towards a circular approach across our value chain, reflected in our products and initiatives: our print supplies closed loop recycling programs, our use of recycled content in hardware, HP Managed Print Services and Instant Ink, Device as a Service, innovative packaging designs, and HP product return and recycling options. We also believe connecting circular economy principles to resource efficiency is critical to success, which is why our products and services utilize our ‘design for environment’ principles: 1.) energy efficiency 2.) materials innovation 3.) design for recyclability.

Additive Manufacturing/3D Printing

Additive manufacturing through 3D printing technology will revolutionize and localize manufacturing. We expect widespread adoption that can reduce waste associated with traditional manufacturing and improving the efficiency of product distribution. Just as digital on-demand printing has allowed companies to print only what they need, when and where they need it, 3D additive manufacturing allow companies to digitize production, reduce or eliminate physical inventories, and enable just-in-time, on-demand and localized delivery models, better matching supply with demand and reducing waste in physical inventories.

HP's 3D additive manufacturing solutions are focused on providing the speed, quality, reliability and cost improvements needed to enable scalable production and widespread adoption. As with our other products, we seek to create 3DP solutions with the least amount of energy consumption, and have determined existing energy efficiency regulatory frameworks are adequate for this emerging technology. In all jurisdictions, HP Multi Jet Fusion products will follow existing generally applied regulations imposed on manufacturing equipment.

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Parts and waste generated during the printing process should be disposed of in compliance with national, state and local regulations. HP offers a waste profile datasheet that provides certain characteristics of the materials which our customers can use to determine the appropriate disposal method.

End-of-life Electronics and Product Recycling

HP believes that all manufacturers share responsibility for managing used electronics with governments, retailers, and customers. We are an industry leader in electronic product and print cartridge take-back programs. HP collects used electronic products for resale and recycling in 74 countries and territories worldwide. We also extend product life of many HP products through refurbishment.

HP fully complies with electronics take-back laws around the world, and actively participates in the development of industry recycling standards, stewardship management programs and the revision and shaping new directives at all stages of the legislative and implementation process based on our extensive experience in the area of Extended Producer Responsibility.

HP does not allow the export of electronic waste from developed to developing countries, and engages with governments to help improve national and international legislation governing the movement of electronic waste, such as the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal. We strongly support the recently updated language that recognizes the appropriate movement of nonworking products between countries to allow for proper repair or responsible recycling.

Most legislation holds manufacturers responsible for collection and treatment of their used products, yet, private collection companies increasingly divert electronics from manufacturer obligated programs (e.g., desktop and portable computers). This makes it difficult for manufacturers to collect mandated target volumes set by government without having to collect expensive to recycle electronics that our company never sold (e.g., CRT TVs and monitors). Further, the current system of private collection optimizes the collection process around precious metals, so bulk materials, such as plastics, are not effectively recovered or used. We are leading discussions on how take-back laws could be adjusted to ensure volume targets remain effective and responsible, measure all waste flows and continue to improve the efficient collection and environmentally responsible recycling of end-of-life products.

We conduct our supplies recycling program in a manner that is environmentally sound and complies with applicable regulatory requirements. Our closed loop ink cartridge recycling process was the first of its kind, where recycled plastics from HP ink cartridges are combined with recycled plastic bottles or apparel hangers to create new original HP ink cartridges. The recycled plastic used in this process has a carbon footprint up to 33 percent smaller than virgin plastics and reduces fossil fuel consumption by 54 percent.

Chemicals Management and Restrictions on Hazardous Substances

HP believes that producers should strive to use better materials and chemicals in their products and to reduce worker exposure to substances of concern in manufacturing processes. We use [Green Screen™ for Safer Chemicals](#) to identify environmentally preferable alternatives.

We comply with the EU's REACH legislation, which includes requirements for assessing and managing the risks posed by chemicals. HP accomplishes this by working closely with suppliers to gather information on listed substances that may be in HP product materials and providing related safety information to customers.

HP fully complies with and supports the aims of the EU RoHS Directive, which limits lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ether (PBDE). With the revision

of the RoHS Directive, four new substances were added – Bis(2-ethylhexyl) phthalate (DEHP), Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) – the restriction of which will kick in by July 2019. HP encourages governments implementing hazardous substance restrictions to harmonize approach with the European Union RoHS requirements. HP supports restrictions of polyvinyl chloride (PVC) and brominated flame retardants (BFRs) from electrical and electronic products. Our commercial displays, Notebook and Desktop computer use a non-halogenated flame retardant which has been Green Screen™ assessed with documented good properties.

It is sometimes necessary to identify chemicals to “black list” and restrict from products, but long-term roadmaps for blacklisting chemicals must be established and stabilized. By identifying chemicals to “white list” as encouraged substitutes, such as the Green Screen™ for safer chemicals, producers can avoid switching from one problematic chemical to another. Sustainable public procurement and ecolabels should recognize and encourage the use of whitelisted chemicals to allow for innovation and creation of economy of scale.

¹ <http://h20195.www2.hp.com/V2/GetPDF.aspx/c03844101.pdf>

² <http://www8.hp.com/us/en/ads/science-of-printing/overview.html>

³ EuroVAPrint, “The environmental impact of reuse vs. recycling of toner and inkjet cartridges” October 2014

⁴ Packaging is the box that comes with the product and all paper (including packaging and materials) inside the box.

⁵ Emissions intensity of HP’s product portfolio refers to tonnes CO₂e/net revenue arising from use of more than 95% of HP product units shipped each year, including notebooks, tablets, desktops, mobile computing devices, and workstations; and HP inkjet, HP LaserJet, and DesignJet printers, and scanners. Expressed as emissions generated per unit of output, based on anticipated usage. For personal systems products, this reflects energy consumed by each product unit during customer use. For printing products, this reflects energy and paper consumed to print each page.